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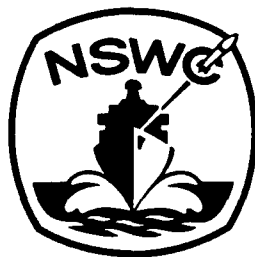
**HEAT TRANSFER TESTING IN THE NSWC
HYPERVELOCITY WIND TUNNEL UTILIZING
CO-AXIAL SURFACE THERMOCOUPLES**

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STRATEGIC SYSTEMS DEPARTMENT

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FOREWORD

This publication is a documentation of a wind tunnel test that took place in the Naval Surface Weapons Center's Hypervelocity Wind Tunnel #9 in December 1979. The experimental program was a heat transfer test made at Mach 14 on a sphere-cone body instrumented with co-axial surface thermocouples. This test was the "trial run" for the use of these gages in the hypervelocity wind tunnel.

This publication describes the thermocouples used, together with a description of how heat transfer rates are calculated from the surface temperature measurements. It explains the details of the test set-up, the model configuration, and the data reduction technique. It also gives the final results of this test and states the accuracy and advantages of this method.

Special acknowledgements are extended to the Arnold Engineering Development Center for their assistance in sending reports that described their experiences with the use of co-axial thermocouples in their wind tunnels. The reports helped us to avoid unnecessary problems with the implementation of the technique.

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By direction



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INTRODUCTION

In the Naval Surface Weapons Center's Hypervelocity Wind Tunnel #9, heat transfer measurements were generally made using Gardon gages (Reference 1). However, the use of co-axial thermocouples to measure heat transfer offers some important advantages:

1. Calibration stability
2. Sturdy design
3. Quick response time
4. Ability to be contoured to model surface

Since these surface thermocouples had never been used in Tunnel 9, a shakedown test plan was established to "iron out" any problems associated with the use of these gages. This publication is a documentation of that shakedown test and its results.

WIND TUNNEL FACILITY

The shakedown test was conducted in the Hypervelocity Wind Tunnel #9 from 10-12 December 1979. Tunnel 9 has a five foot diameter test cell that uses nitrogen as the working fluid. For the shakedown test the Mach 14 nozzle was used to expand the nitrogen. The average run time for Tunnel 9 is 1.3 seconds, with uniform flow occurring during the last 0.7 seconds of the run (Fig. 1). During this uniform flow, the model can be pitched through a range of angles of attack. More information about Tunnel 9 can be found in Reference 2.

¹ Gardon, Robert, "An Instrument for the Direct Measurement of Intense Thermal Radiation," The Review of Scientific Instruments, Vol. 24, No. 5, May 1953.

² Hill, J. A. F., Wardlaw, A. B., Jr., Pronchick, S. W., and Holmes, J. E., "Verification Tests in the Mach 14 Nozzle of the Hypervelocity Tunnel at NSWC (White Oak)," AIAA Paper 77-150, Jan 1977.

DESCRIPTION OF CO-AXIAL SURFACE THERMOCOUPLE

The model number TCS-101-E thermocouples used in the shakedown test are manufactured by Medtherm Corporation in Huntsville, Alabama. Figure 2(a) shows a picture of a typical thermocouple, and Figure 2(b) shows a cross-sectional view of the sensing probe of the thermocouple. The sensing probe consists of two metals, chromel and constantan; chromel being the outer tube (first thermocouple element) and constantan being the center wire (second thermocouple element). The two elements are insulated except for a vacuum deposited metallic coating which is placed on the end of the probe to form a thermal junction between the chromel and the constantan. Therefore, temperature readings are measured only at the very tip of the sensing probe. Just below the sensing probe is a mounting thread so that the thermal junction can be positioned relative to the surface of the wall (Fig. 2(c)).

Surfaces of models tested in the wind tunnel are often curved. Since any surface discrepancies could cause disturbances in the boundary layer, the thermocouples are contoured to the surface by sanding down the tip of the thermocouple using 180 grit sandpaper. Although this sanding process takes away the plating, a thermal junction is still created by the blending of the two metals.

The average time response for a thermocouple with the vacuum deposited coating is one microsecond. For the "blended metal" thermal junction the average time response is about ten microseconds.

Thermal properties for chromel and constantan are given in Table 1, and thermal properties for the chromel-constantan thermocouple are given in Table 2.

THEORY BEHIND CALCULATING HEAT FLUX FROM SURFACE THERMOCOUPLES

For a one-dimensional heat flux into a homogeneous, semi-infinite solid, the heat flux, $\dot{q}(t)$ can be calculated from the change in surface temperature, $T(t)$, from $t = 0$ by the following equation (References 3 and 4):

$$\dot{q}(t) = K(\pi k)^{-1/2} \left[\frac{T(t)}{t^{1/2}} + \frac{1}{2} \int_0^t \frac{T(t) - T(\tau)}{(t - \tau)^{3/2}} d\tau \right] \quad (1)$$

where τ is the dummy time variable of integration. Since a linear relationship is assumed to exist between the actual thermocouple output voltage, $E(t)$, and temperature, ($\Delta E = \delta \Delta T$), Equation (1) can be rewritten as:

³ Carslaw, H. S. and Jaeger, J. C., Conduction of Heat in Solids, Second Edition, Oxford, Clarendon Press, 1959.

⁴ Vidal, R. J., "Model Instrumentation Techniques for Heat Transfer and Force Measurements in a Hypersonic Shock Tunnel," CAL Report No. AD-917-A-1, Feb 1956, WADC TN 56-315, AD 97238.

$$\dot{q}(t) = K(\pi k)^{-1/2} \delta^{-1} \left[\frac{E(t)}{t^{1/2}} + \frac{1}{2} \int_0^t \frac{E(t) - E(\tau)}{(t - \tau)^{3/2}} d\tau \right] \quad (2)$$

Since the integral in Equation (2) is very difficult to evaluate, a method will be illustrated later in this report (See DATA REDUCTION) for the calculation of $\dot{q}(t)$.

PARAMETERS FOR CREATING A HOMOGENEOUS, SEMI-INFINITE SOLID

Since Equations (1) and (2) are based on the fact that the heat is flowing into a homogeneous, semi-infinite solid, there are three parameters to consider in making a wind tunnel model wall with a thermocouple mounted into it behave as a homogeneous, semi-infinite wall.

The first parameter to consider is the lumped thermal property, $\sqrt{k/K}$, of the chromel, constantan, and the model wall. If this property is relatively the same for all three materials, then the concept of homogeneity is valid. Since $\sqrt{k/K}$ for chromel and constantan is approximately $2.45 \text{ ft}^2\text{-sec}^{1/2}\text{-}^\circ\text{F}/\text{BTU}$, then the thermocouple itself is essentially homogeneous. To prevent any radial heat conduction the material that the thermocouple is mounted in (model wall) should also have a $\sqrt{k/K}$ value approximately equal to 2.45.

The second and third parameters are the duration of the actual wind tunnel run and the effective length of the thermocouple sensing probe. If the wind tunnel run is of short duration and the sensing probe is long enough, then the semi-infinite assumption is valid (Reference 5). Since the duration of an average Tunnel 9 run is 1.3 seconds, an appropriate sensing probe length, L , can be selected using the graph shown in Figure 3. Therefore,

$$L(kt)^{-1/2} = 2.6 \quad \text{for 0\% error.} \quad (3)$$

$$\begin{aligned} \text{For } k &= 8.84 \times 10^{-3} \text{ in}^2/\text{sec} \quad (\text{constantan}) \\ t &= 1.3 \text{ seconds} \end{aligned}$$

$$\text{then } L \geq .28 \text{ inches.}$$

The appropriate sensing probe length and wall thickness for a model in Tunnel 9 should be greater than .28 inches.

MODEL CONFIGURATION

The model configuration that was tested was a sphere-cone type body. The nosetip had a 1.8" radius and the cone half-angle was 7° . The model was made out of 17-4PH Stainless steel. The $\sqrt{k/K}$ for this material is $2.44 \text{ ft}^2\text{-sec}^{1/2}\text{-}^\circ\text{F}/\text{BTU}$,* which is very close to the $\sqrt{k/K}$ of the chromel-constantan thermocouple.

⁵ Brown, H. K., "The Theoretical Response of Heat Transfer Gages Employed in Shock Tubes," AVCO Research Laboratory, Research Note 58, Feb 1958.

* Obtained from Materials Selector 75, Vol. 80, No. 4.

There were two interchangeable conical sections used in the test. The first conical section was referred to as the "thick wall body" because its wall was $3/8$ " thick (which is thicker than the critical 0.28 inches), and the second conical section was referred to as the "thin wall body" because its wall thickness was only 0.125" thick. Figure 4 shows a sketch of the two configurations.

INSTRUMENTATION

In the nosetip of the model, two co-axial thermocouples were mounted as shown in Figure 5. Thermocouple "1" was mounted directly in the wall; the wall at that point being thicker than 0.28 inches. However, co-axial thermocouple "2" was mounted in the wall inside a 17-4PH stainless steel 0.5" diameter plug that was required to make the wall thicker than 0.28 inches.

In the "thick wall" conical section, three co-axial thermocouples and three Gardon gages were mounted as shown in Figure 6. The three thermocouples were mounted 5.83 inches downstream from the nosetip; one thermocouple on the leeward meridian, one on the 90° meridian, and one on the windward meridian. Each Gardon gage was mounted one inch downstream from the thermocouples; one on each of the meridians.

In the "thin wall" conical section, three co-axial thermocouples and three Gardon gages were also mounted in the same positions as the "thick wall" body, as shown in Figure 6. However, since the wall was only 0.125" thick, the thermocouples were mounted in the wall with plugs that would make the wall 0.375". The plugs had varying diameters to determine a minimum permissible plug diameter.

The Gardon gages used in both the "thick" and "thin" wall bodies were manufactured by Thermogage and had been used in previous wind tunnel tests. Each gage's heat flux sensitivity, C , was calculated using a calibrated lamp as a known heat source. Each gage's time delay constant, τ_G , used in the data reduction equations (see DATA REDUCTION) was then calculated by observing the time it took for each gage to respond to 63.2% of its fullscale output for a step heat input. The Gardon gages were used in this shakedown test as a check to the co-axial thermocouples.

TEST SCHEDULE

The test matrix and run conditions are given in Table 3. The pitch sweeps were set up to compare upsweep (Run 496) with downsweep (Run 498) data, to compare a static angle of attack (Run 497) with the upsweep and downsweep data, and to compare thick and thin wall configurations (Runs 496 and 499).

DATA REDUCTION

As was stated previously, Equation (2) is very difficult to evaluate. For reduction of the raw surface thermocouple output, $E(t)$, into heat flux data, the Dixon Method (Reference 6) was used. The Dixon Method is a two-step procedure

⁶Kendall, D. N. and Dixon W. P., "Heat Transfer Measurements in a Hot Shot Wind Tunnel," presented at the IEEE Aerospace Systems Conference, Seattle, Washington, 11-15 Jul 1966.

that does not require any initial smoothing of the raw thermocouple output. First, the total heat transfer to the surface is calculated using the following equation:

$$Q(t_n) = K(k\pi)^{-\frac{1}{2}}\delta^{-1} \sum_{i=1}^n \left[\frac{E(t_{i-1}) + E(t_i)}{(t_n - t_{i-1})^{\frac{1}{2}} + (t_n - t_i)^{\frac{1}{2}}} \right] \Delta t \quad (4)$$

where $n = 0, 1, 2 \dots (t/\Delta t + 1)$ and where Δt is an equal time increment.

Then, the heat transfer rate is computed by differentiating $Q(t)$:

$$\dot{q}(t) = \frac{dQ(t)}{dt} \quad (5)$$

The expression for differentiating $Q(t)$ is described in Reference 7 and is:

$$\dot{q}(t_n) = \frac{dQ(t_n)}{dt} = \frac{1}{(40)(\Delta t)} \left[-2Q(t_{n-8}) - Q(t_{n-4}) + Q(t_{n+4}) + 2Q(t_{n+8}) \right] \quad (6)$$

A sample voltage was recorded just prior to the wind tunnel run. This sample voltage was then subtracted from all subsequent voltage readings. Therefore, at $t_0 = 0$, $E(t_0) = 0$ which implies that $q(t_0) = 0$.

For the reduction of the Gardon gage output, $E(t)$, the raw data was first smoothed, reversed, and smoothed again using a sixth order Butterworth digital filter set at a cutoff frequency of 5Hz. Heat transfer rates were then calculated using the following standard Tunnel 9 equation:

$$\dot{q}(t) = C \left[E(t) + \tau_G \frac{dE(t)}{dt} \right] \quad (7)$$

where $c = \text{calibrated gage sensitivity } (\frac{\dot{q}}{E(t)})$

$\tau_G = \text{calibrated time delay constant}$

The term $\frac{dE(t)}{dt}$ is calculated by the method given in Reference 7.

$$\frac{dE(t_n)}{dt} = \frac{1}{(40)(\Delta t)} \left[-2E(t_{n-8}) - E(t_{n-4}) + E(t_{n+4}) + 2E(t_{n+8}) \right] \quad (8)$$

where $n = 0, 1, 2 \dots (t/\Delta t + 1)$

⁷Ehrich, Fredric F., "Differentiation of Experimental Data Using Least Squares Fitting," Journal of the Aeronautical Sciences, Vol. 22, No. 2, Feb 1955.

Equation (7) is only valid if at $t_0 = 0$, $\dot{q}(t_0) = 0$. Therefore, a sample of data was recorded just prior to each wind tunnel run, and this sample voltage was then subtracted from all subsequent voltages so that at $t_0 = 0$, $E(t_0) = 0$ implying that $\dot{q}(t_0) = 0$.

From the heat transfer rates calculated from the co-axial thermocouple and Gardon gage readings, Stanton numbers were calculated by the following equation:

$$ST = \dot{q} \left[\rho_{\infty} U_{\infty} C_p (T_{01} - T_w) \right]^{-1} \quad (9)$$

where \dot{q} = calculated heat transfer rate (BTU/ft²-sec)

ρ_{∞} = free stream density (lbm/ft³)

U_{∞} = free stream velocity (ft/sec)

C_p = heat capacity for nitrogen = 0.2481 BTU/lbm - °F

T_{01} = equivalent ideal gas supply temperature (°F)
(calculated from T_0 and tables in Reference 8)

T_w = measured wall temperature (°F)*

The free stream properties are calculated from a pitot tube measurement in the flow and a supply pressure, P_0 , measurement.

RESULTS

Table 4 is a listing of the data obtained from the shakedown test. It should be noted that T5 went bad on Run 499, and G3 went bad on Run 498. The listing only shows data during the "uniform flow" portion of each run. Figures 7 through 14 show plotted data of Stanton number vs. angle of attack for all four runs. Heat transfer calculations made by the G.E. 3-D Viscous Code (Reference 9) are also shown on these figures.

⁸ Cullotta, S. and Richards, B. E., "Methods for Determining Conditions in Real Nitrogen Expanding Flows," VKI-TN-58, Feb 1970.

* For Gardon gage data the nearest co-axial thermocouple temperature reading was used as the t_w value.

⁹ Hecht, A. M., Nestler, D. E., and Richbourg, D. H., "Application of a Three-Dimensional Viscous Computer Code to Reentry Vehicle Design," AIAA Paper 79-0306, Jan 1979.

ACCURACY

Comparisons will be made with respect to the repeatability of the upsweep (Run 496) and downsweep (Run 498) data; the repeatability of the upsweep (Run 496), downsweep (Run 498), and static angle (Run 497) data; and the repeatability of the "thick wall" configuration (Run 496) and the "thin wall" configuration (Run 499) data. A comparison will also be made between the calculations of the G.E. 3-D Viscous Code (Reference 9) and the data for Runs 496, 498, and 499. It should be noted that the following tunnel properties have the following previously observed accuracies:

Supply pressure, $P_o - \pm .4\%$

Supply temperature, $T_o - -1.7\% \text{ to } +.5\%$

Pitot measurement - $\pm .3\%$

Free stream Mach number, $M_\infty - \pm .4\%$

Free stream pressure, $P_\infty - \pm 2.8\%$

Free stream unit Reynolds number, $Re_\infty/\text{ft} - -1.4\% \text{ to } +2.8\%$

The angle of attack measurements are accurate to within 0.1° for Run 496 and to within 0.3° for Runs 497 through 499.

The Dixon method calculates heat transfer rates to within an accuracy of less than 1%. As for the Gardon gages, the gage sensitivities and the time delay constants are accurate to $\pm 5\%$.

Comparison of Upsweep vs. Downsweep Data. Table 5 lists the accuracies for the repeatability of the Stanton number data for Run 496 (upsweep) vs. Run 498 (downsweep) for each gage at 5 angles of attack. The repeatability for the two runs shows an average percentage difference of about 7.8%.

Comparison of Upsweep-Downsweep vs. Static Angle Data. Table 6 lists the accuracies for the repeatability of the Stanton number data for Run 496 (upsweep) vs. Run 497 (static angle) and Run 498 (downsweep) vs. Run 497 (static angle) for each gage at an angle of attack of 10° . The repeatability between the dynamic and static data has an average difference of about 4.1%.

Comparison of "Thick Wall" vs. "Thin Wall" Data. Table 7 lists the accuracies for the repeatability of the Stanton number data for Run 496 (thick wall) vs. Run 499 (thin wall) for each gage at five angles of attack. G2 is not listed because it was slightly recessed in the model wall and was, therefore, measuring lower heating rates. T3, T4, and T5 were mounted in plugs of $3/4"$, $1/2"$, and $1/4"$ diameters, respectively. Each plug made the wall thickness $3/8"$. Since T3 went bad, the results are inconclusive as to the minimum diameter plug that can be used so that the wall will be semi-infinite in the radial direction. A plug may

⁹See footnote 9 on page 10.

not be needed as long as the sensor length is greater than 0.28 inch. However, T2 was mounted in a 1/2" diameter plug and its repeatability difference throughout the test was about 6.5%. Therefore, a configuration of a 1/2" diameter plug and thermocouple is a possible working configuration.

Comparison of Runs 496, 498, and 499 vs. the G.E. 3-D Viscous Code. Table 8 lists the accuracies for agreement of the Stanton number data between Runs 496, 498, and 499, and the GE 3-D Viscous Code (Reference 9) for each gage at 0° and 5° angle of attack. The average difference in agreement with the code is about 8.8%, with the code's calculation of the leeward heating contributing to most of the error.

CONCLUSIONS

In comparing the surface thermocouple method of measuring heat transfer to the use of Gardon gages in Tunnel 9, the thermocouples have distinct advantages:

1. Gardon gages require a calibration, whereas the thermocouples have an inherent bi-metallic calibration.
2. Gardon gages have a slow response time (on the order of 50 msec) that must be rectified in the data reduction procedure to acquire accurate timewise data, whereas the thermocouples have an almost "instantaneous" response time (about 10 μ sec).
3. Gardon gages have a delicate, thin skin that can be broken by the flow (e.g., G3 on Run 498), whereas thermocouples are a solid piece of metal that cannot be disturbed by the flow.
4. Gardon gages cannot be contoured to the model surface, e.g., G2 was slightly recessed in the model wall causing it to measure a lower heating rate, whereas the thermocouples can be contoured exactly to the model surface.

An estimate of the accuracy of heat transfer rates by the thermocouples is +6%. This is slightly better than the 7% accuracy that has been observed for Gardon gages in Tunnel 9. In light of this accuracy along with the advantages over the Gardon gages, the co-axial thermocouples proved to be a viable method for measuring aerodynamic heating during pitch sweeps in Tunnel 9.

⁹See footnote 9 on page 10.

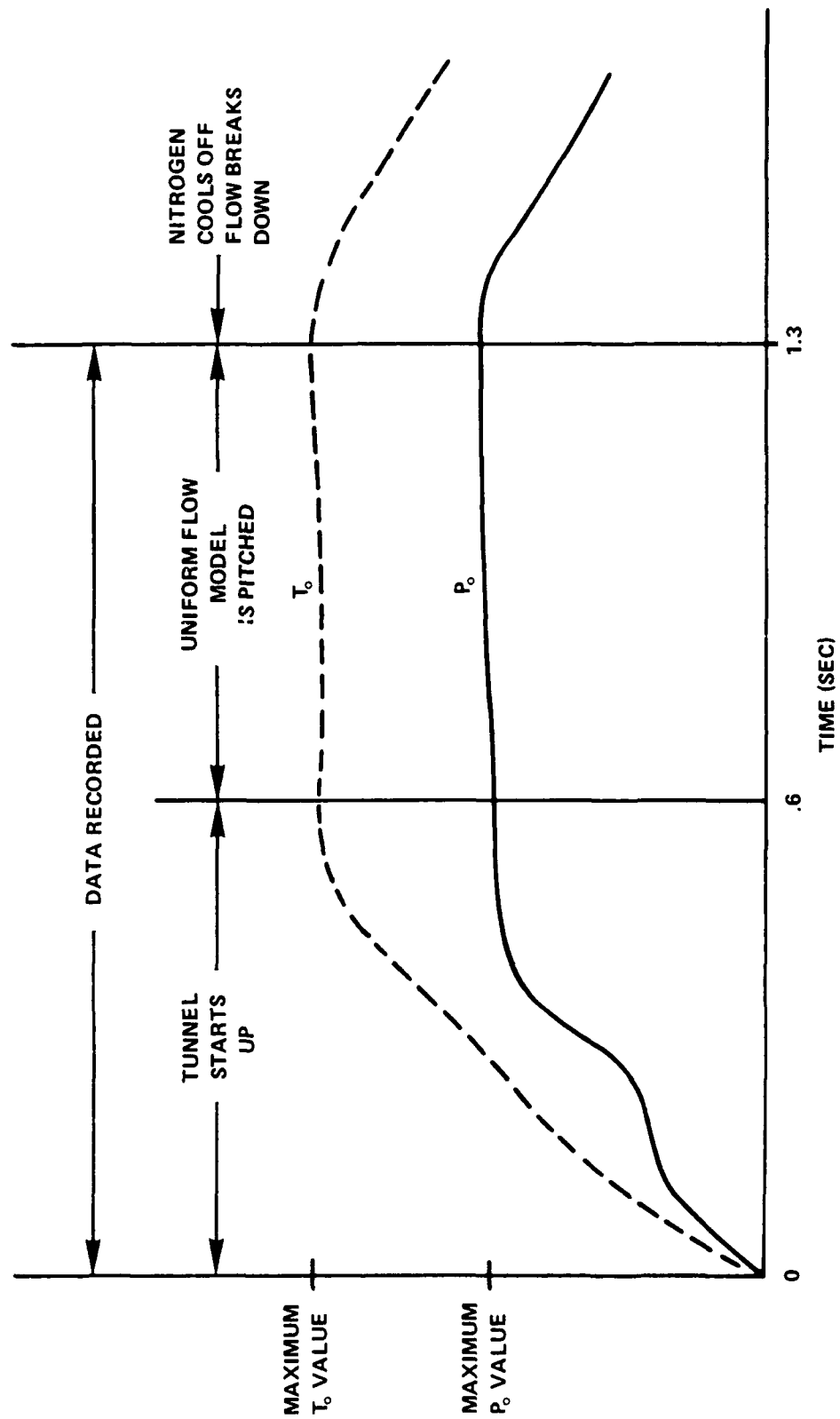


FIGURE 1 TIME SEQUENCE OF EVENTS FOR TUNNEL 9



FIGURE 2(a) A TYPICAL TCS MODEL THERMOCOUPLE

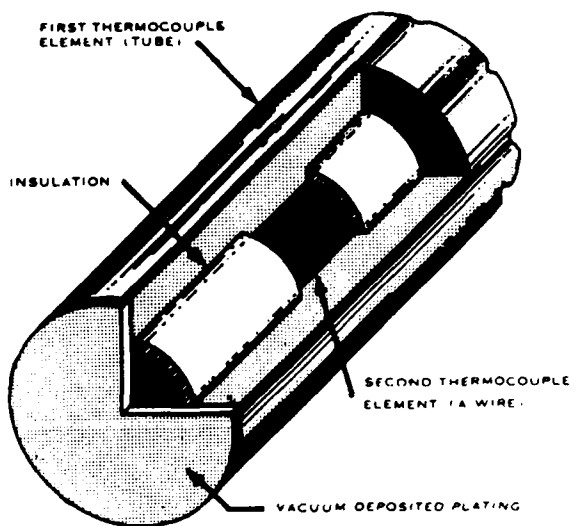


FIGURE 2(b) CROSS-SECTIONAL VIEW OF THERMOCOUPLE. (PLATING AND INSULATION EXAGGERATED IN SIZE)

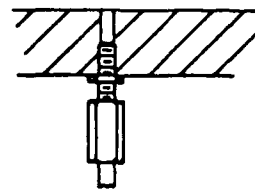


FIGURE 2(c) THERMOCOUPLE PROBE MOUNTED IN MODEL WALL

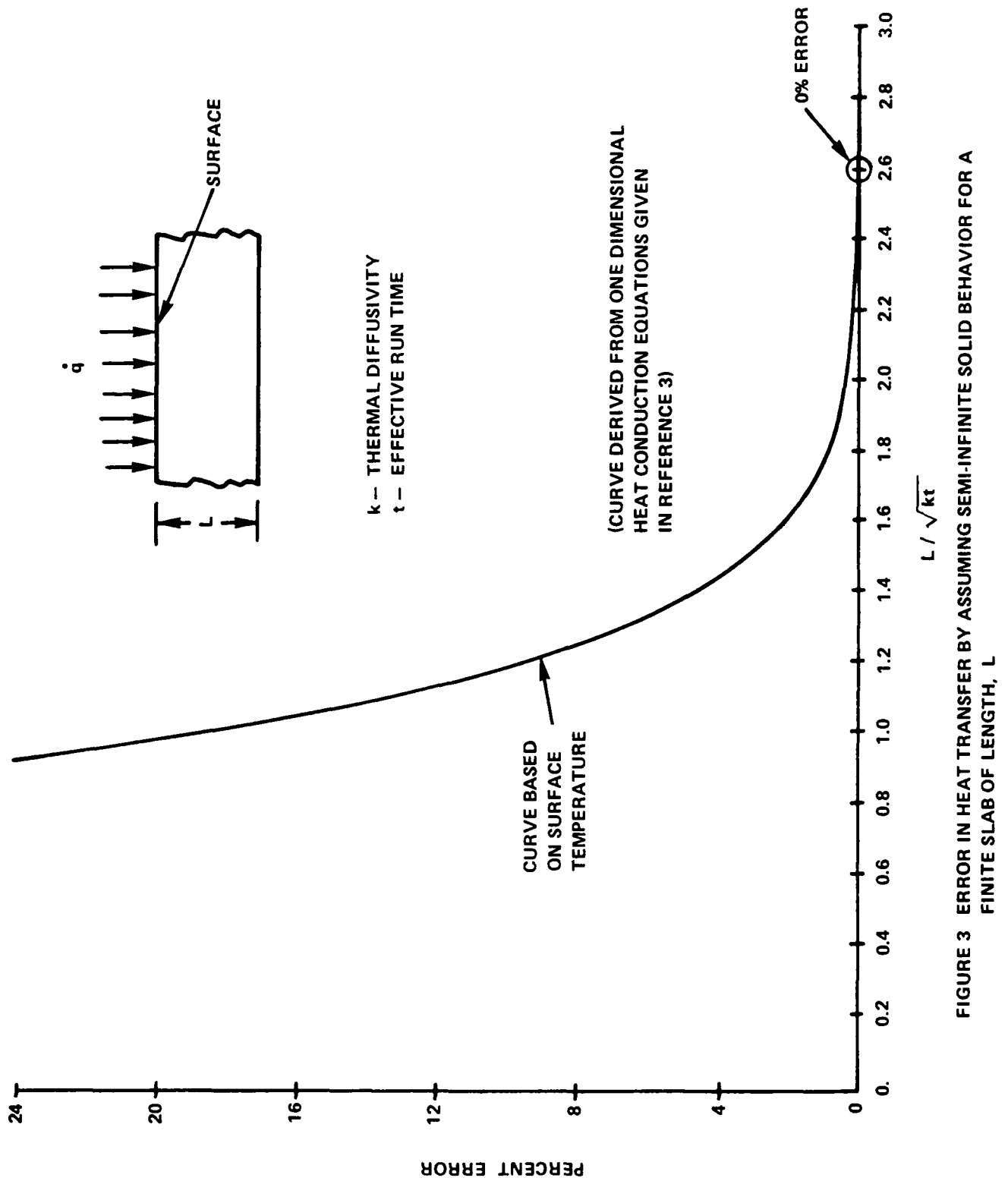


FIGURE 3 ERROR IN HEAT TRANSFER BY ASSUMING SEMI-INFINITE SOLID BEHAVIOR FOR A FINITE SLAB OF LENGTH, L

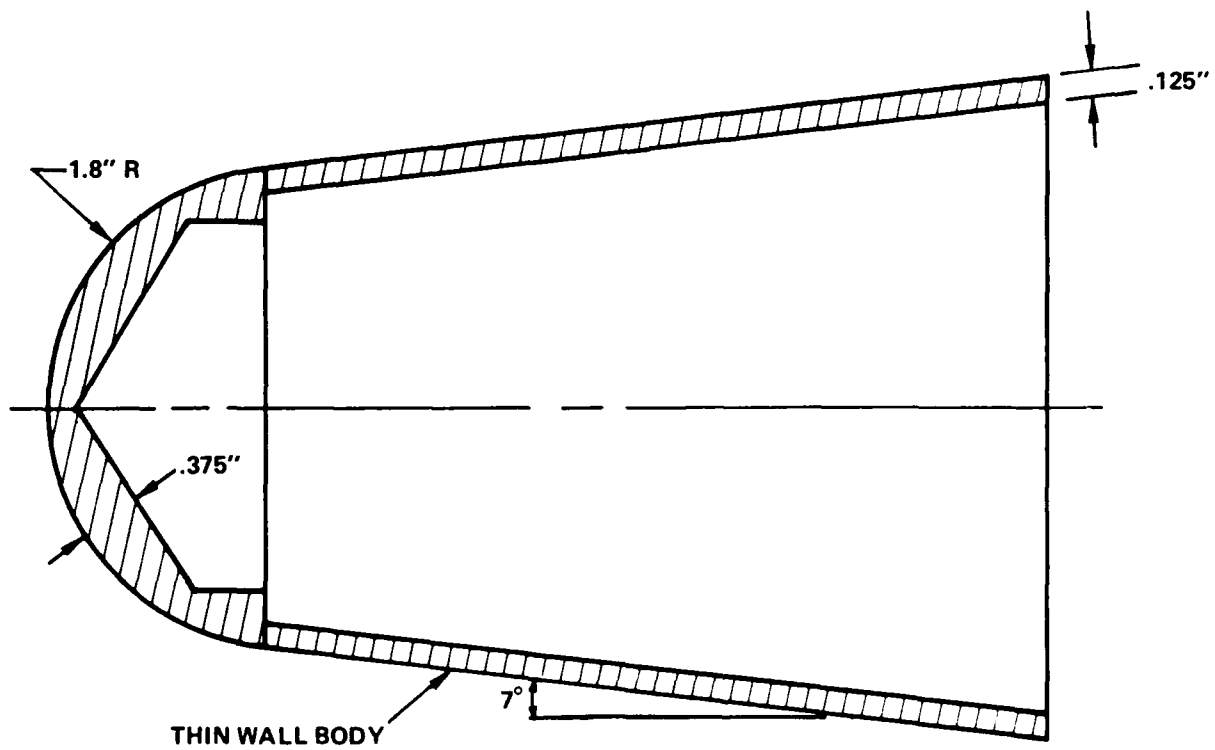
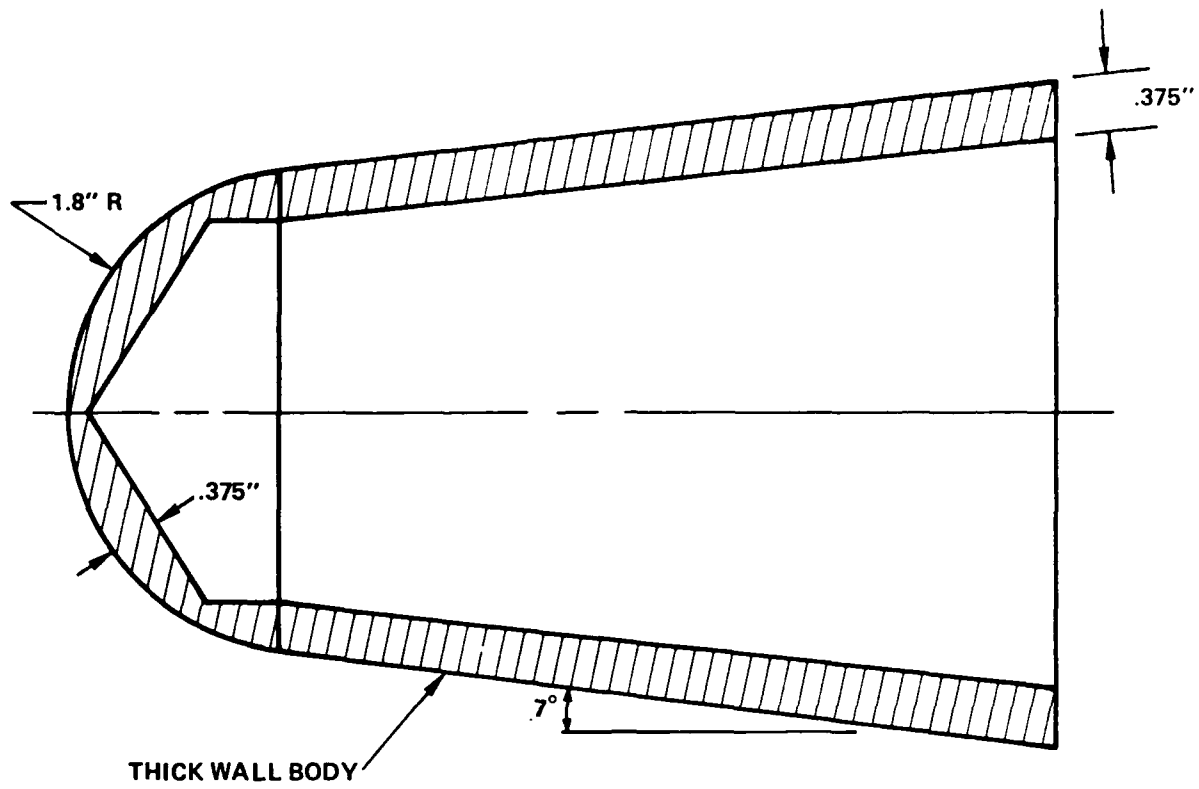
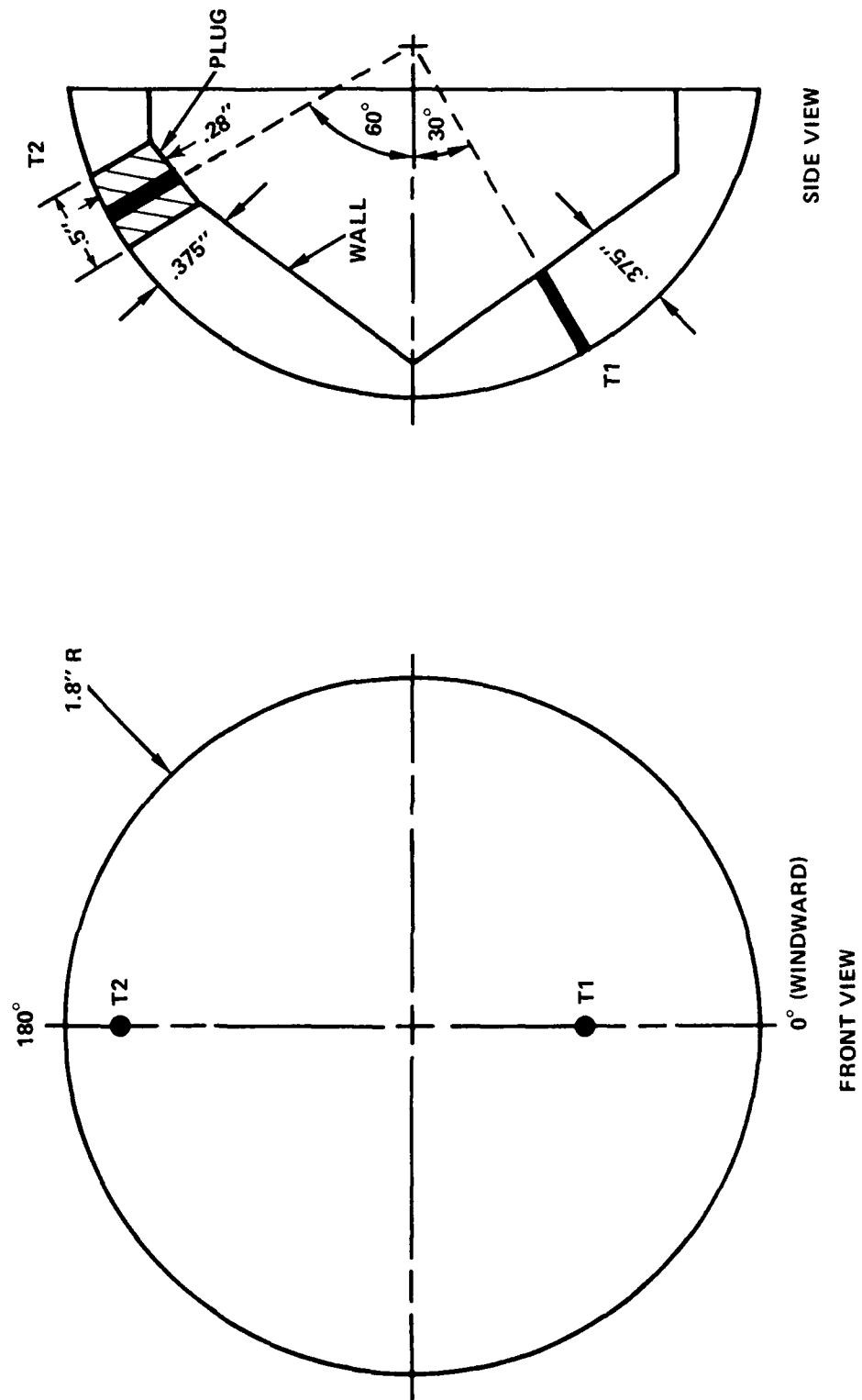


FIGURE 4 MODEL CONFIGURATIONS



NOT TO SCALE

FIGURE 5 NOSETIP INSTRUMENTATION

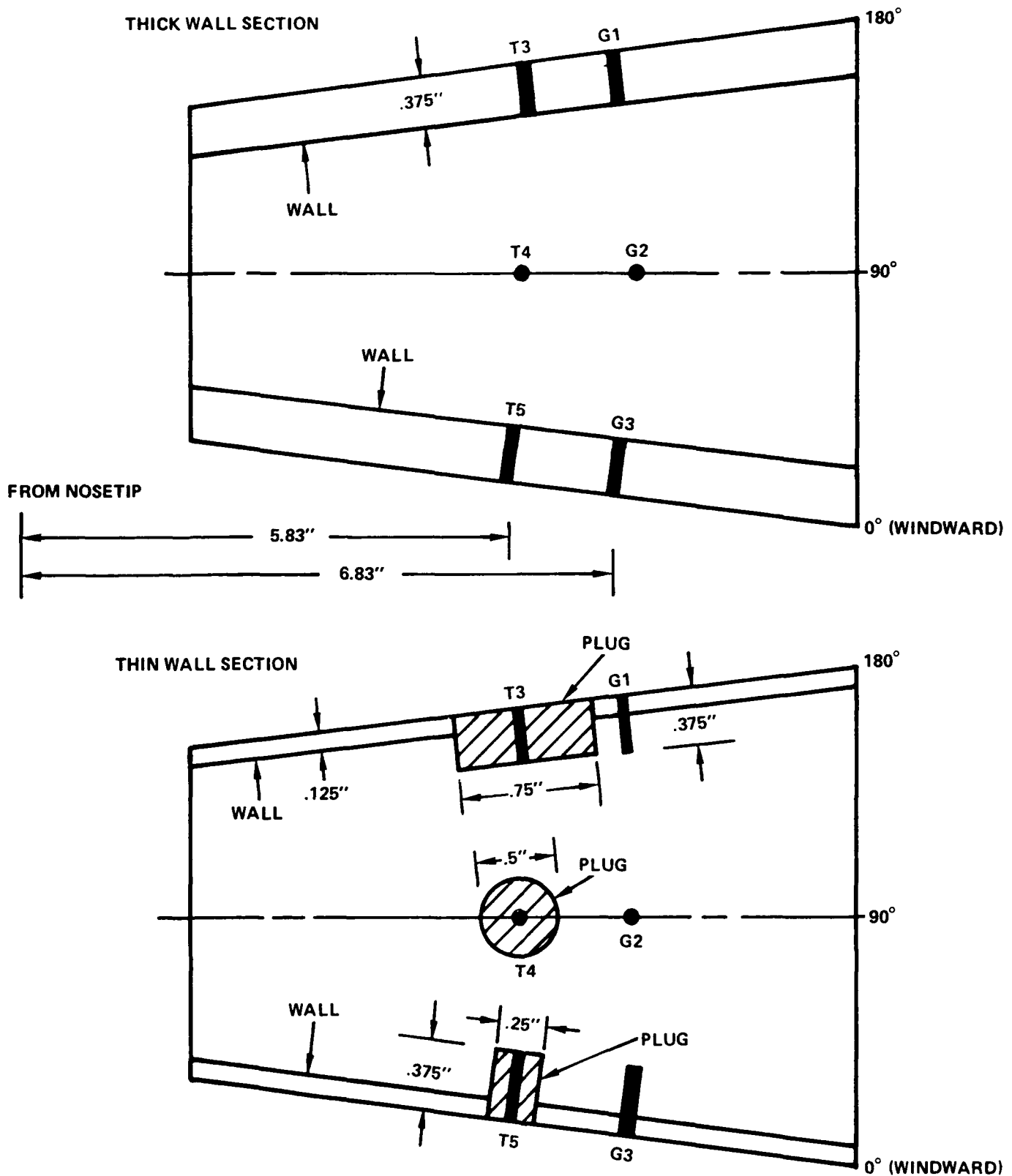


FIGURE 6 CONICAL SECTION INSTRUMENTATION (NOT TO SCALE)

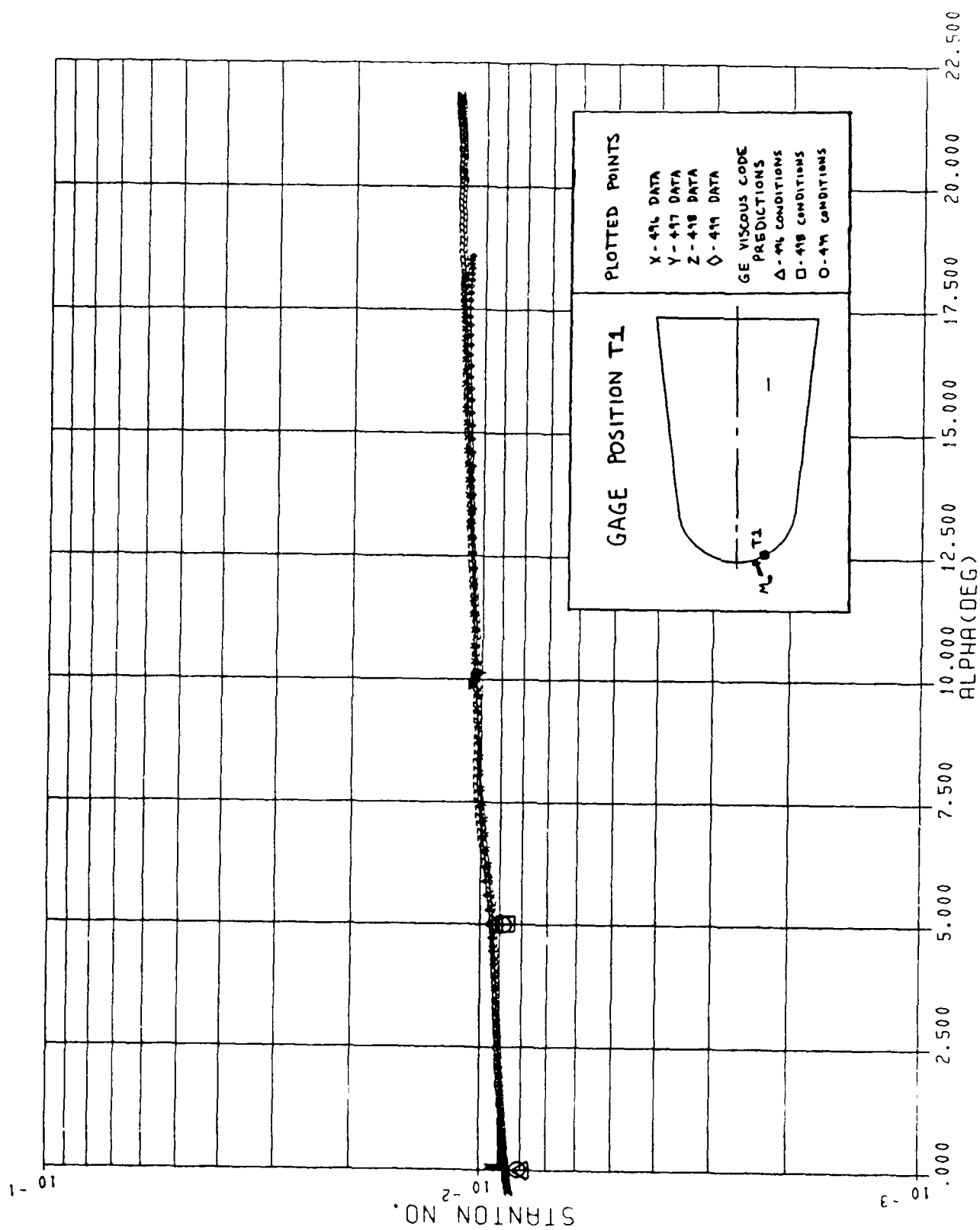


FIGURE 7 STANTON NUMBER VS. ANGLE OF ATTACK FOR ALL 4 RUNS (T1)

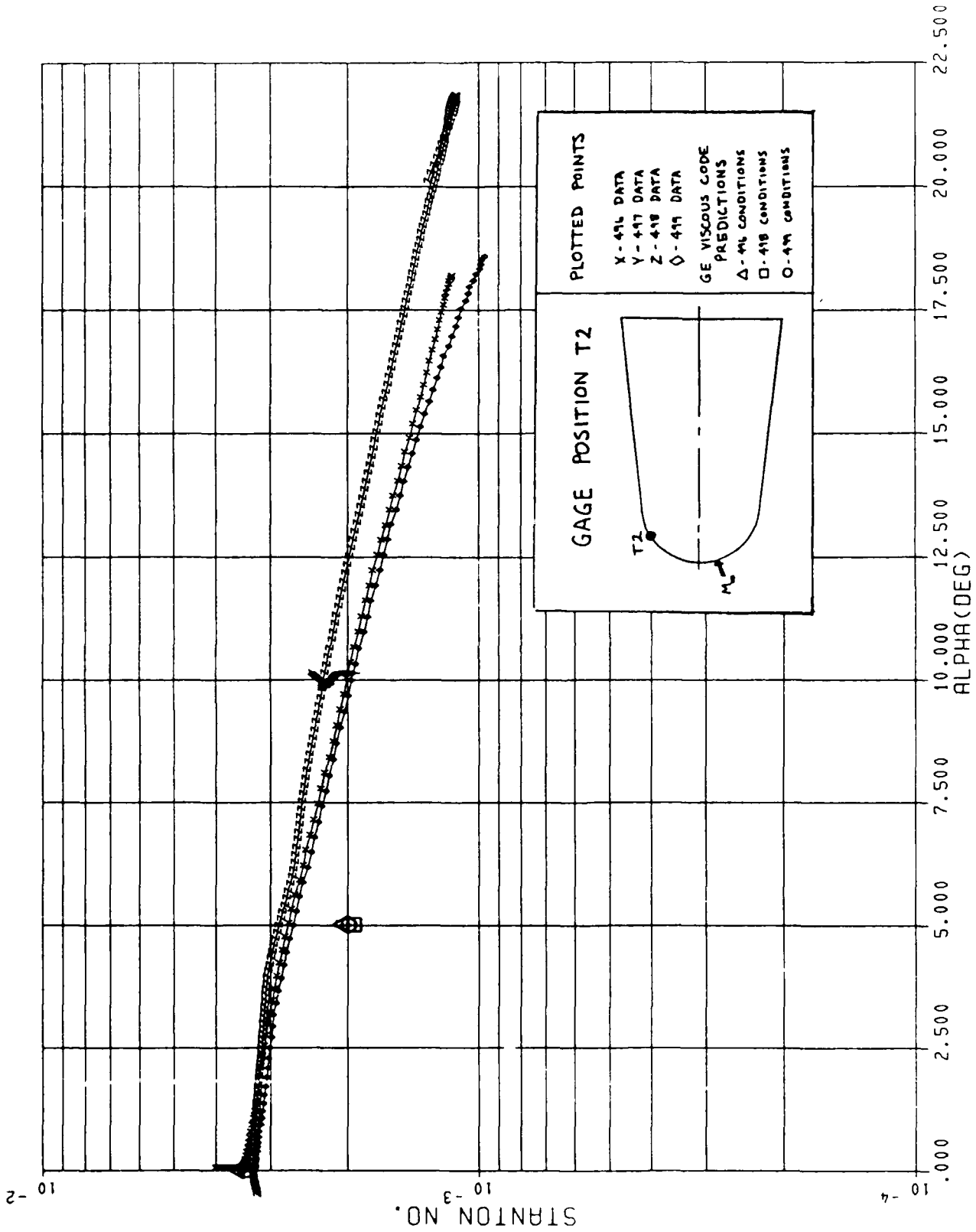


FIGURE 8 STANTON NUMBER VS. ANGLE OF ATTACK FOR ALL 4 RUNS (T2)

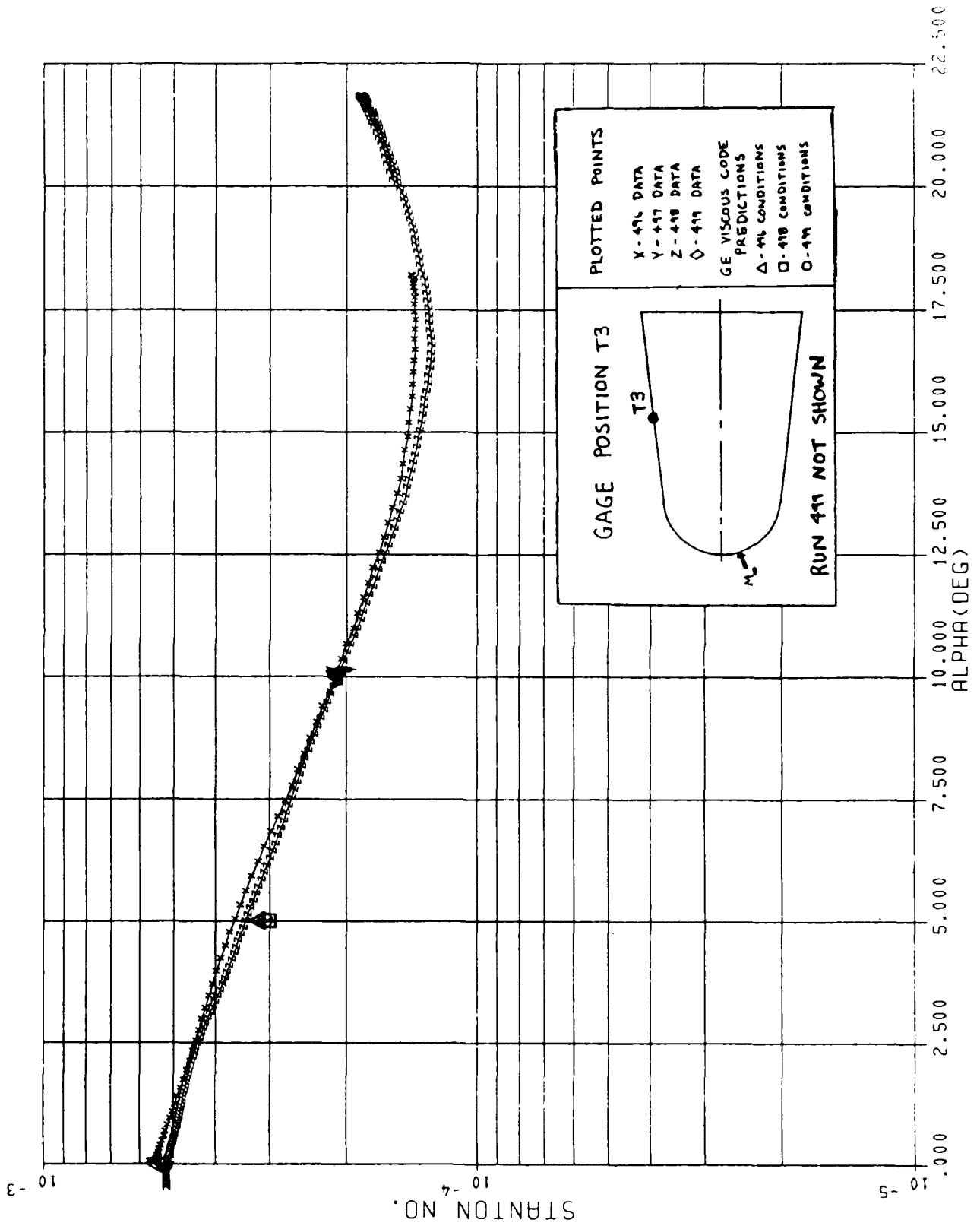


FIGURE 9 STANTON NUMBER VS. ANGLE OF ATTACK FOR ALL 4 RUNS (T3)

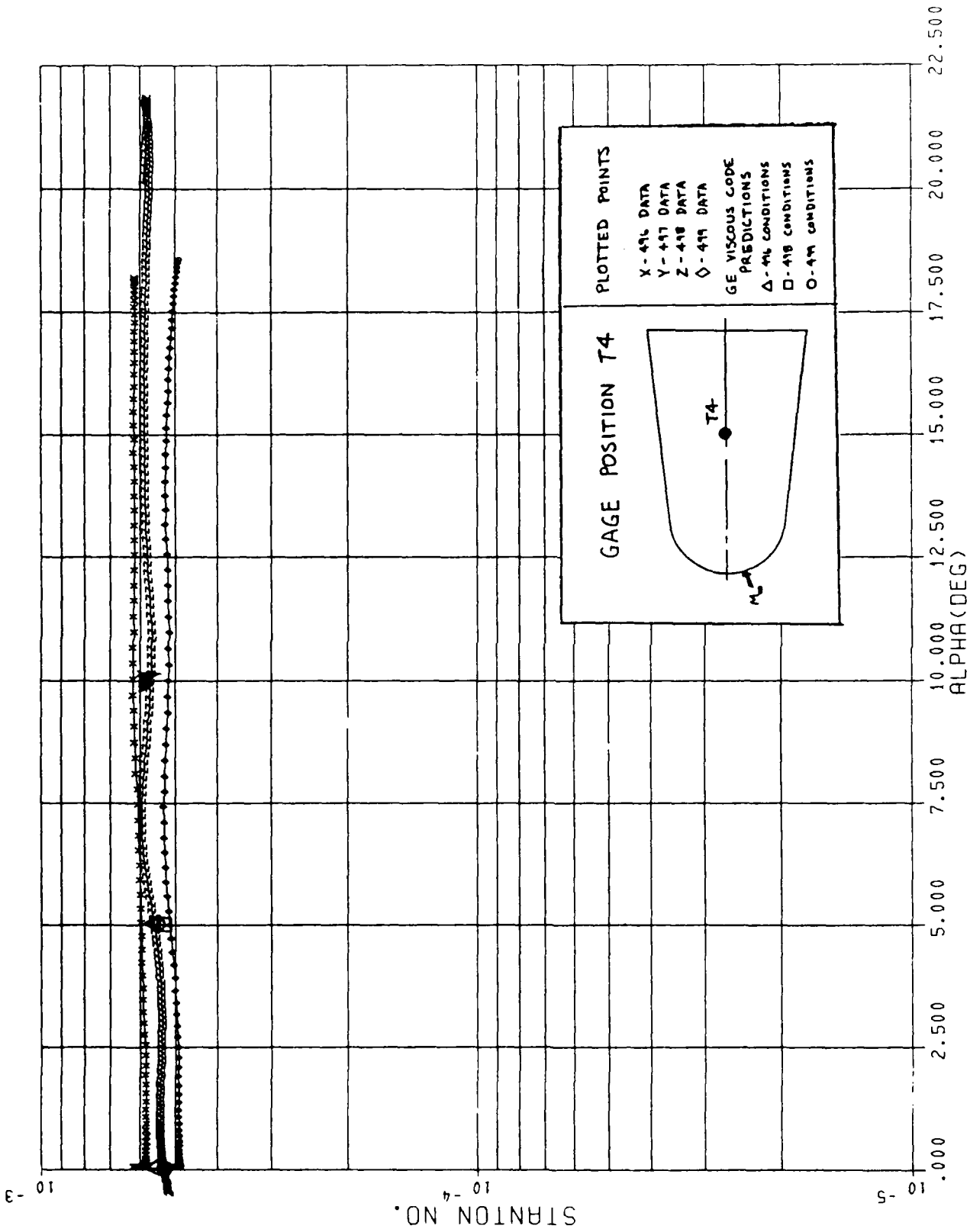


FIGURE 10 STANTON NUMBER VS. ANGLE OF ATTACK FOR ALL 4 RUNS (T4)

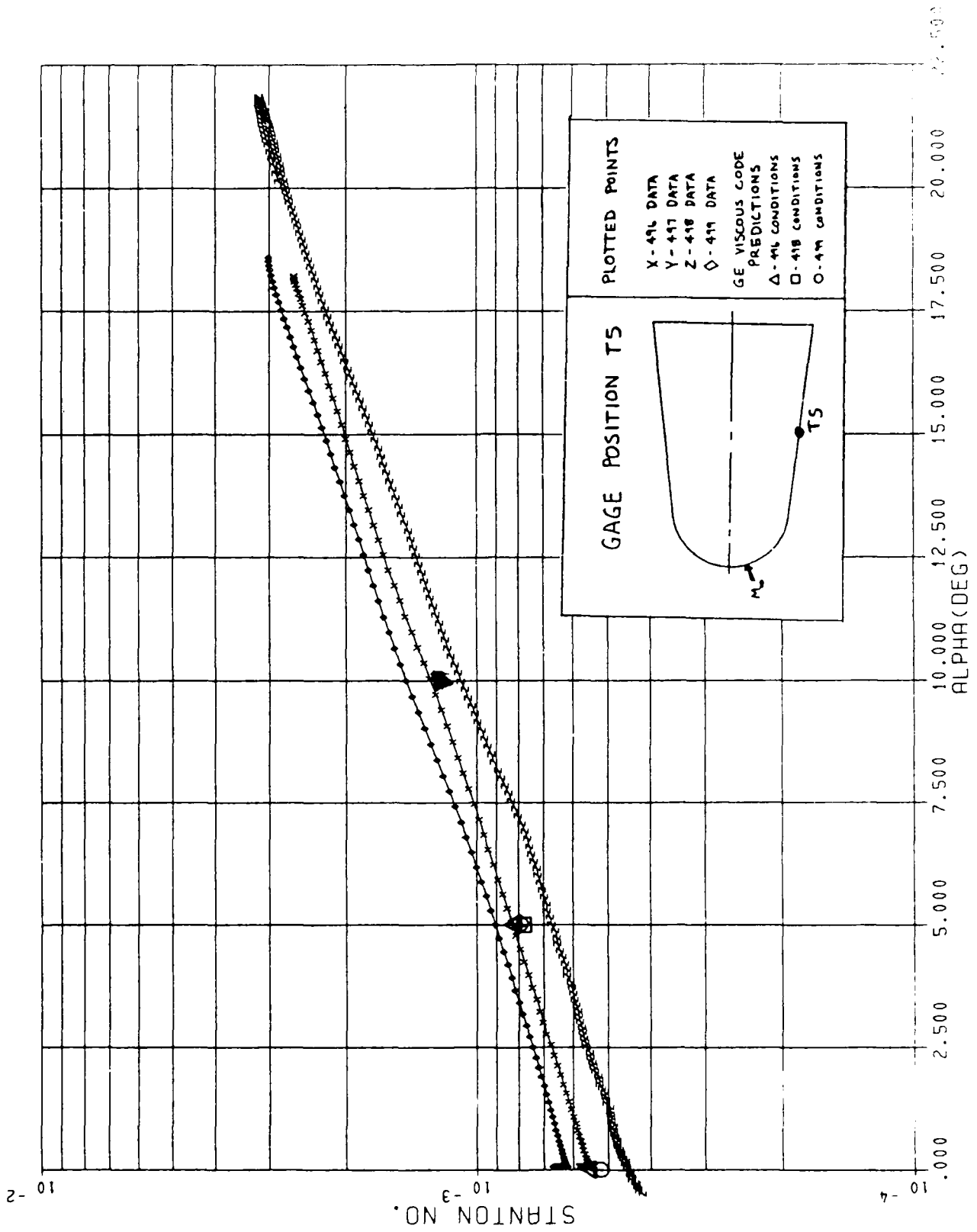


FIGURE 11 STANTON NUMBER VS. ANGLE OF ATTACK FOR ALL 4 RUNS (T5)

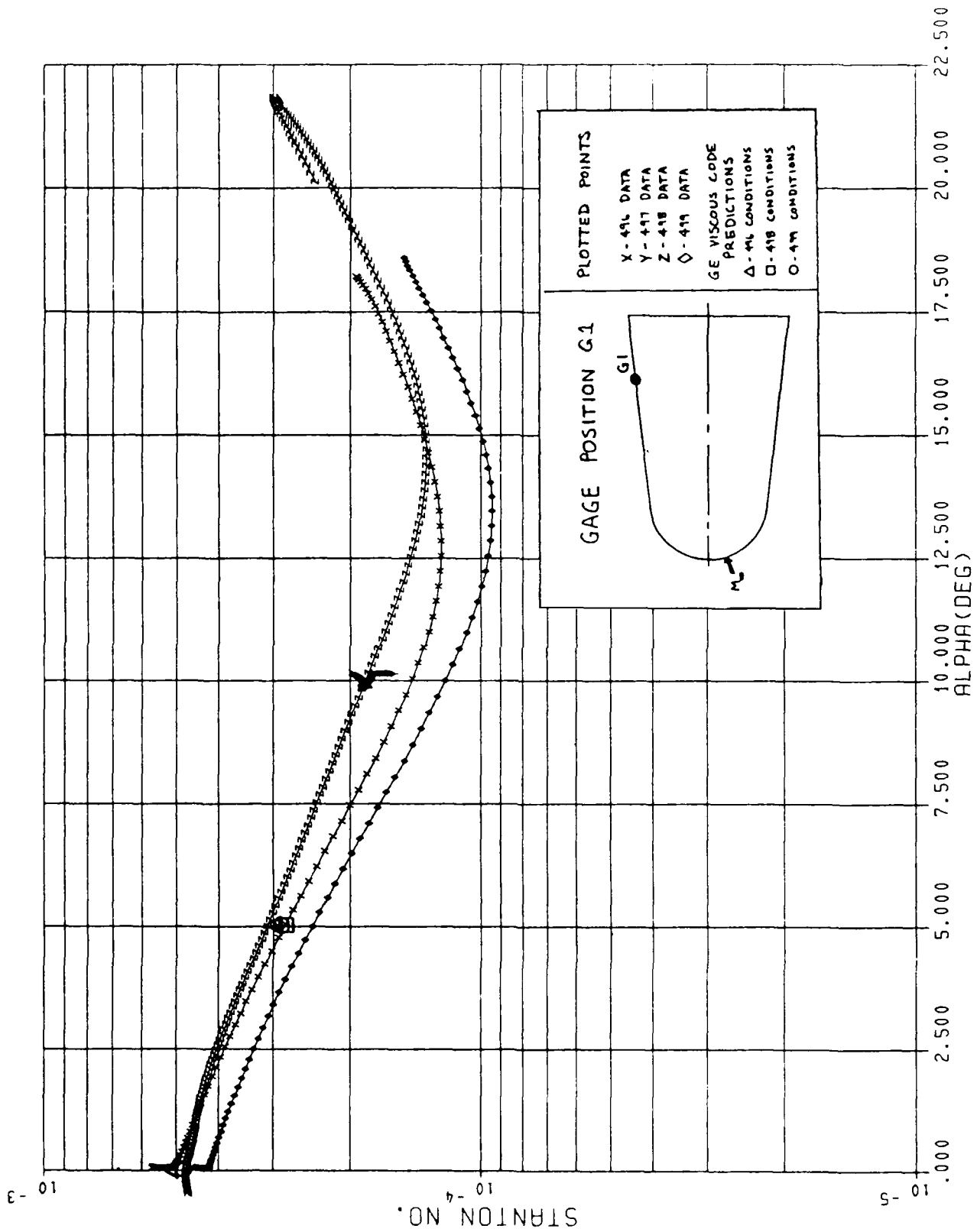


FIGURE 12 STANTON NUMBER VS. ANGLE OF ATTACK FOR ALL 4 RUNS (G1)

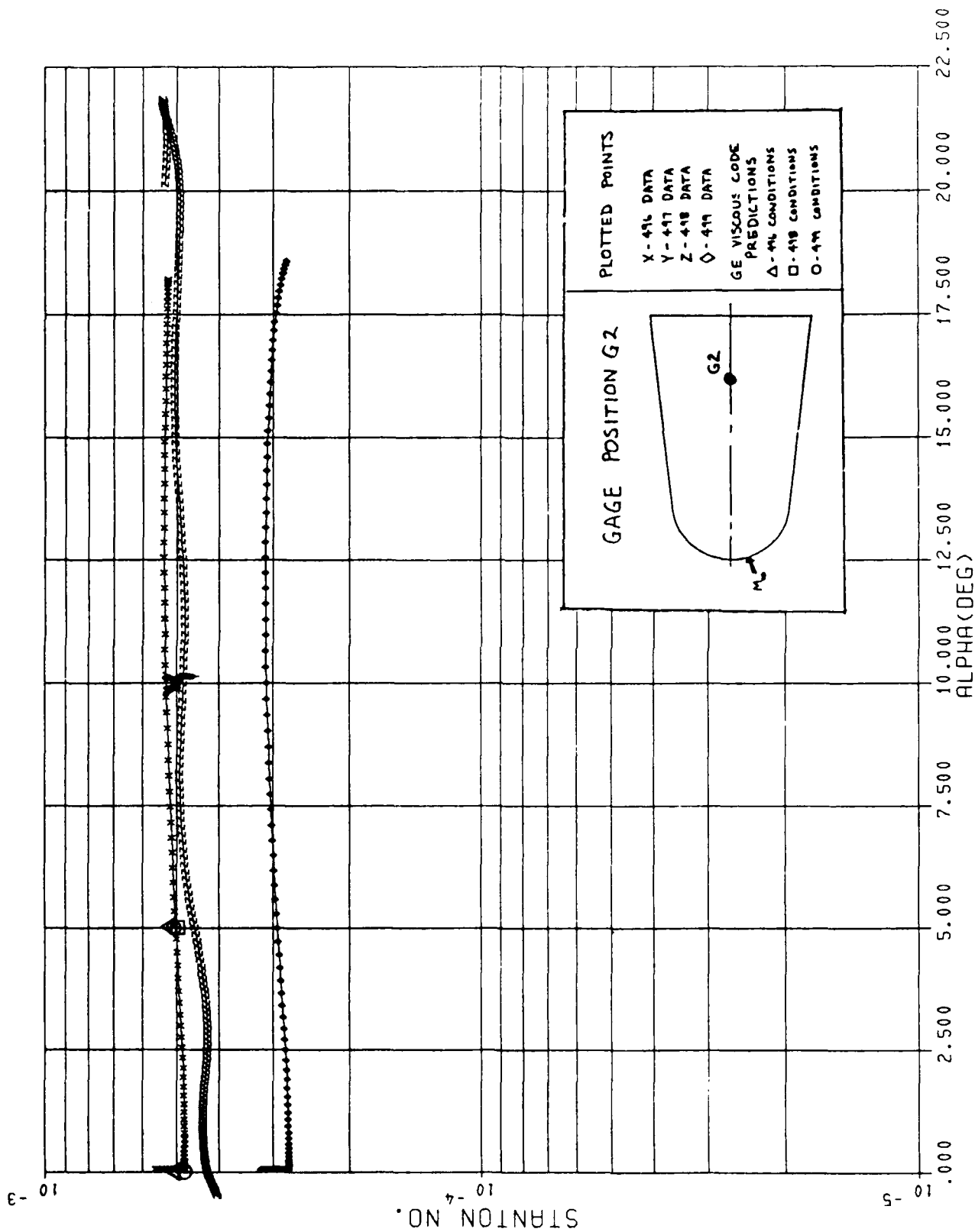


FIGURE 13 STANTON NUMBER VS. ANGLE OF ATTACK FOR ALL 4 RUNS (G2)

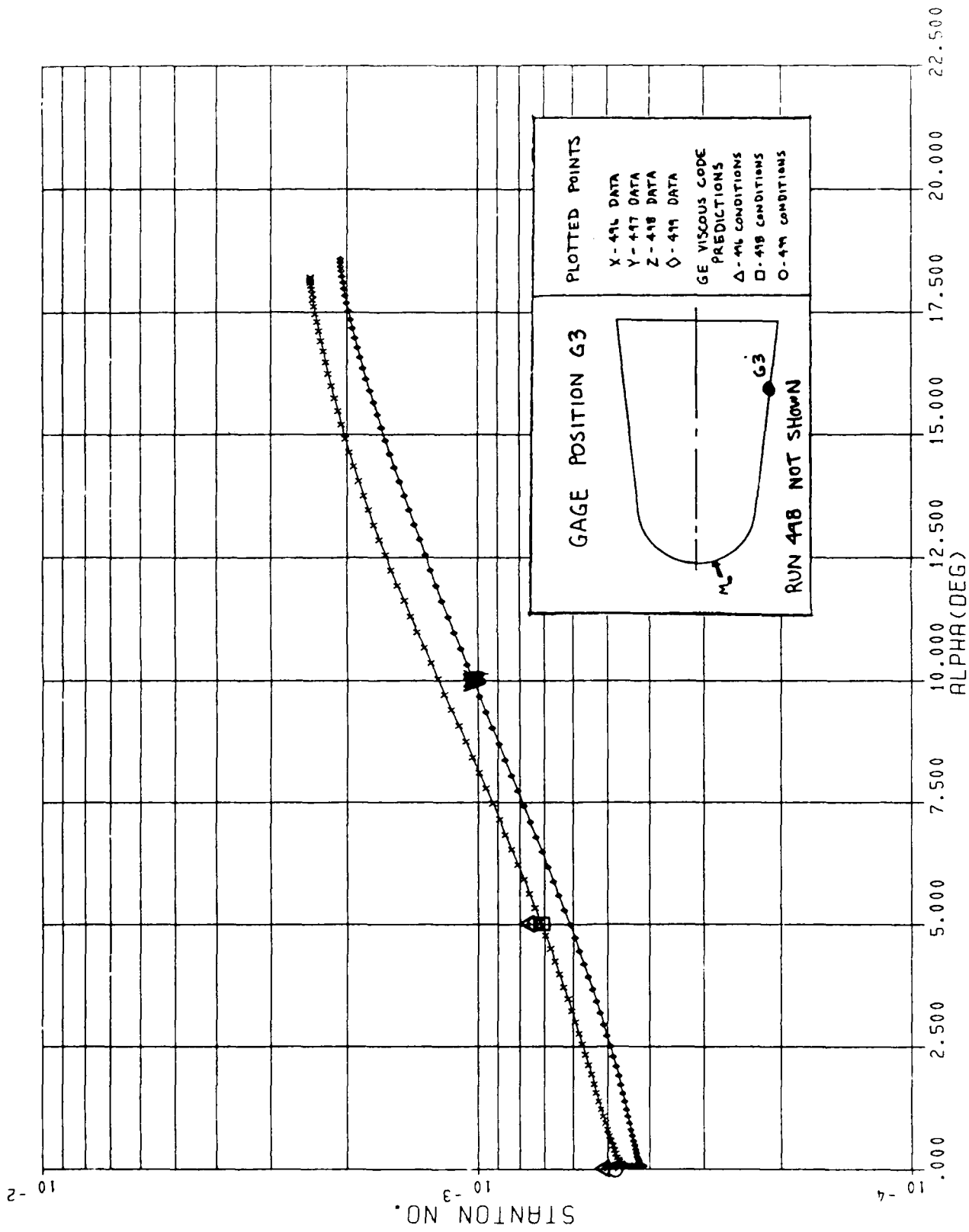


FIGURE 14 STANTON NUMBER VS. ANGLE OF ATTACK FOR ALL 4 RUNS (G3)

TABLE 1 THERMAL PROPERTIES OF CHROMEL* AND CONSTANTAN**

Thermal Property	Chromel	Constantan
1. Thermal Conductivity K (BTU/in-sec-°F) @ 75°F	$.242 \times 10^{-3}$	$.267 \times 10^{-3}$
2. Specific Heat C _p (BTU/lb-°F) @ 68°F	.107	.094
3. Density ρ (lb/in ³)	.315	.322
4. Thermal Diffusivity k (in ² /sec)	7.18×10^{-3}	8.84×10^{-3}
5. Melting Point (°F)	2600	2210

* Properties given by the Hoskins Manufacturing Company, Detroit, Michigan 48208

** Properties given by the Thermo-Electric Company, Inc., Saddle Brook, New Jersey 07662

TABLE 2 THERMAL PROPERTIES OF CHROMEL-CONSTANTAN THERMOCOUPLE*

Thermal Property	Value
1. Lumped Thermal Property	
$\sqrt{k/K}$ (ft ² -sec ^{1/2} -°F/BTU)	2.45
2. Thermoelectric Sensitivity**	
δ (μv/°F)	34.5
3. Heat Flux Sensitivity	
$E(t)/\sqrt{t}/\dot{q}$ $\left(\frac{\text{mv/sec}^{1/2}}{\text{BTU/ft}^2 - \text{sec}} \right)$.096

* Theoretical values

** Value obtained from National Bureau of Standards Circular #561 for a chromel-constantan thermocouple

TABLE 3 TEST SCHEDULE AND RUN CONDITIONS

Run No.	Model Configuration	Average Mach No.	Average P ₀ (psia)	Average T ₀ (°F)	Average Re _∞ /ft	Angle of Attack Pitch Sweep during Uniform Flow
496	"Thick Wall" Body	14.01	19604	2913	3.44 X 10 ⁶	0° for .4sec then a pitch from 0° to 18°
497	"Thick Wall" Body	13.82	19538	2867	3.73 X 10 ⁶	≈10° constant
498	"Thick Wall" Body	13.85	19782	2802	3.92 X 10 ⁶	Pitch from 19° to 22° to 0°
499	"Thin Wall" Body	13.97	20741	2872	3.85 X 10 ⁶	Same as 496

TABLE 4 DATA LISTING

TIME	ALPHA	PO	TO	TOI	MACH	PINF	TI-F	UINF	RMDINF	MEINF
.441	.06	18469.5	2604.1	3121.8	14.16	.0450	87.1	6591.1	1.345E-03	3.892E+06
.445	.06	18489.7	2613.4	3133.4	14.17	.0448	87.3	6601.4	1.337E-03	3.867E+06
.449	.06	18514.9	2623.4	3145.9	14.17	.0447	87.6	6613.3	1.330E-03	3.842E+06
.453	.06	18543.8	2633.4	3154.2	14.17	.0446	87.9	6625.3	1.324E-03	3.818E+06
.457	.06	18574.9	2644.9	3173.0	14.18	.0446	88.2	6636.1	1.318E-03	3.795E+06
.461	.06	18606.9	2656.0	3187.0	14.18	.0446	88.5	6650.4	1.313E-03	3.774E+06
.465	.06	18638.5	2667.1	3200.8	14.17	.0446	88.9	6663.3	1.309E-03	3.744E+06
.470	.06	18668.7	2677.8	3214.3	14.17	.0447	89.3	6675.7	1.305E-03	3.735E+06
.474	.06	18696.7	2687.9	3227.1	14.17	.0448	89.6	6687.2	1.302E-03	3.718E+06
.478	.06	18721.9	2697.3	3236.9	14.16	.0448	90.0	6697.4	1.300E-03	3.704E+06
.482	.06	18744.1	2705.7	3249.5	14.16	.0449	90.3	6707.5	1.298E-03	3.691E+06
.486	.06	18763.1	2713.2	3258.4	14.15	.0450	90.6	6715.9	1.297E-03	3.680E+06
.490	.06	18774.1	2719.6	3267.0	14.15	.0452	90.8	6723.2	1.296E-03	3.671E+06
.495	.06	18792.5	2725.1	3273.9	14.14	.0453	91.1	6729.3	1.295E-03	3.665E+06
.499	.06	18804.7	2729.6	3279.6	14.14	.0453	91.3	6734.3	1.295E-03	3.659E+06
.503	.06	18813.4	2733.3	3284.2	14.13	.0454	91.4	6738.4	1.295E-03	3.655E+06
.507	.06	18822.0	2736.2	3288.0	14.13	.0455	91.6	6741.4	1.296E-03	3.653E+06
.511	.06	18830.3	2739.7	3291.1	14.13	.0456	91.7	6744.6	1.296E-03	3.650E+06
.515	.06	18838.7	2740.8	3293.8	14.12	.0456	91.8	6747.0	1.296E-03	3.649E+06
.519	.06	18847.6	2742.8	3296.4	14.12	.0457	91.9	6749.3	1.296E-03	3.647E+06
.524	.06	18857.7	2744.6	3298.9	14.12	.0457	91.9	6751.6	1.296E-03	3.645E+06
.528	.06	18868.9	2747.0	3301.8	14.12	.0457	92.0	6754.1	1.296E-03	3.643E+06
.532	.06	18881.4	2749.4	3304.9	14.12	.0458	92.1	6756.9	1.296E-03	3.640E+06
.536	.06	18895.2	2752.3	3308.6	14.12	.0458	92.2	6760.2	1.295E-03	3.637E+06
.540	.06	18910.2	2755.6	3312.8	14.12	.0458	92.3	6764.0	1.294E-03	3.632E+06
.544	.06	18926.4	2759.3	3317.7	14.12	.0459	92.4	6768.3	1.293E-03	3.627E+06
.548	.06	18943.4	2763.6	3323.1	14.12	.0459	92.6	6773.2	1.292E-03	3.621E+06
.553	.06	18961.0	2768.2	3329.1	14.12	.0459	92.7	6778.5	1.291E-03	3.614E+06
.557	.06	18978.9	2773.2	3335.5	14.12	.0460	92.9	6784.3	1.290E-03	3.606E+06
.561	.06	18997.0	2778.5	3342.3	14.11	.0460	93.1	6790.3	1.288E-03	3.599E+06
.565	.06	19015.0	2784.0	3349.3	14.11	.0461	93.3	6796.5	1.287E-03	3.591E+06
.569	.06	19032.6	2789.6	3356.4	14.11	.0461	93.5	6802.8	1.286E-03	3.583E+06
.574	.06	19049.8	2795.1	3363.4	14.10	.0462	93.7	6809.0	1.285E-03	3.576E+06
.578	.06	19066.6	2800.6	3370.4	14.10	.0463	94.0	6815.2	1.284E-03	3.569E+06
.582	.06	19082.8	2805.8	3377.0	14.10	.0464	94.2	6821.1	1.284E-03	3.563E+06
.586	.06	19098.6	2810.8	3383.4	14.09	.0465	94.4	6826.6	1.284E-03	3.558E+06
.590	.06	19114.0	2815.4	3389.3	14.09	.0466	94.6	6831.9	1.284E-03	3.554E+06
.594	.06	19129.1	2819.7	3394.6	14.08	.0467	94.8	6836.7	1.285E-03	3.550E+06
.598	.06	19144.0	2823.6	3399.9	14.08	.0468	95.0	6841.1	1.285E-03	3.546E+06
.602	.06	19158.6	2827.1	3404.4	14.07	.0470	95.2	6845.1	1.285E-03	3.542E+06
.606	.06	19173.6	2830.3	3408.6	14.07	.0471	95.3	6848.7	1.286E-03	3.540E+06
.610	.06	19188.4	2833.2	3412.3	14.06	.0472	95.5	6851.9	1.290E-03	3.546E+06
.614	.06	19203.4	2835.8	3415.7	14.06	.0474	95.7	6854.9	1.291E-03	3.547E+06
.618	.06	19218.5	2838.1	3418.9	14.05	.0475	95.8	6857.6	1.293E-03	3.548E+06
.622	.06	19233.7	2840.3	3421.7	14.05	.0477	95.9	6860.1	1.295E-03	3.550E+06
.626	.06	19248.9	2842.3	3424.5	14.04	.0478	96.1	6862.4	1.297E-03	3.552E+06
.630	.06	19264.1	2844.3	3427.1	14.04	.0479	96.2	6864.7	1.299E-03	3.554E+06
.634	.06	19279.1	2846.2	3429.6	14.03	.0481	96.3	6866.9	1.301E-03	3.555E+06
.638	.06	19293.8	2848.1	3432.2	14.03	.0482	96.4	6869.4	1.302E-03	3.556E+06
.642	.06	19308.2	2850.1	3434.8	14.03	.0483	96.5	6871.4	1.304E-03	3.557E+06
.646	.06	19322.2	2852.1	3437.5	14.02	.0484	96.6	6873.7	1.305E-03	3.558E+06
.650	.06	19335.8	2854.2	3440.4	14.02	.0485	96.7	6876.2	1.306E-03	3.557E+06
.654	.06	19349.0	2856.5	3443.4	14.02	.0485	96.9	6878.8	1.307E-03	3.556E+06
.658	.06	19361.7	2858.9	3446.6	14.02	.0486	97.0	6881.6	1.307E-03	3.555E+06
.662	.06	19374.2	2861.5	3449.9	14.01	.0486	97.1	6884.5	1.307E-03	3.553E+06
.666	.06	19386.6	2864.2	3453.4	14.01	.0487	97.2	6887.6	1.306E-03	3.550E+06
AVERAGE		18975.2	2768.0	3329.3	14.11	.0463	92.9	6778.1	1.299E-03	3.630E+06

RTN	496	WTH	1333	CO-AXIAL THERMOCOUPLE SHANTON 9N	T-T	12/10/79-12/12/79	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20	T21	T22	T23	T24	T25	T26	T27	T28	T29	T30	T31	T32	T33	T34	T35	T36	T37	T38	T39	T40	T41	T42	T43	T44	T45	T46	T47	T48	T49	T50	T51	T52	T53	T54	T55	T56	T57	T58	T59	T60	T61	T62	T63	T64	T65	T66	T67	T68	T69	T70	T71	T72	T73	T74	T75	T76	T77	T78	T79	T80	T81	T82	T83	T84	T85	T86	T87	T88	T89	T90	T91	T92	T93	T94	T95	T96	T97	T98	T99	T100	T101	T102	T103	T104	T105	T106	T107	T108	T109	T110	T111	T112	T113	T114	T115	T116	T117	T118	T119	T120	T121	T122	T123	T124	T125	T126	T127	T128	T129	T130	T131	T132	T133	T134	T135	T136	T137	T138	T139	T140	T141	T142	T143	T144	T145	T146	T147	T148	T149	T150	T151	T152	T153	T154	T155	T156	T157	T158	T159	T160	T161	T162	T163	T164	T165	T166	T167	T168	T169	T170	T171	T172	T173	T174	T175	T176	T177	T178	T179	T180	T181	T182	T183	T184	T185	T186	T187	T188	T189	T190	T191	T192	T193	T194	T195	T196	T197	T198	T199	T200	T201	T202	T203	T204	T205	T206	T207	T208	T209	T210	T211	T212	T213	T214	T215	T216	T217	T218	T219	T220	T221	T222	T223	T224	T225	T226	T227	T228	T229	T230	T231	T232	T233	T234	T235	T236	T237	T238	T239	T240	T241	T242	T243	T244	T245	T246	T247	T248	T249	T250	T251	T252	T253	T254	T255	T256	T257	T258	T259	T260	T261	T262	T263	T264	T265	T266	T267	T268	T269	T270	T271	T272	T273	T274	T275	T276	T277	T278	T279	T280	T281	T282	T283	T284	T285	T286	T287	T288	T289	T290	T291	T292	T293	T294	T295	T296	T297	T298	T299	T300	T301	T302	T303	T304	T305	T306	T307	T308	T309	T310	T311	T312	T313	T314	T315	T316	T317	T318	T319	T320	T321	T322	T323	T324	T325	T326	T327	T328	T329	T330	T331	T332	T333	T334	T335	T336	T337	T338	T339	T340	T341	T342	T343	T344	T345	T346	T347	T348	T349	T350	T351	T352	T353	T354	T355	T356	T357	T358	T359	T360	T361	T362	T363	T364	T365	T366	T367	T368	T369	T370	T371	T372	T373	T374	T375	T376	T377	T378	T379	T380	T381	T382	T383	T384	T385	T386	T387	T388	T389	T390	T391	T392	T393	T394	T395	T396	T397	T398	T399	T400	T401	T402	T403	T404	T405	T406	T407	T408	T409	T410	T411	T412	T413	T414	T415	T416	T417	T418	T419	T420	T421	T422	T423	T424	T425	T426	T427	T428	T429	T430	T431	T432	T433	T434	T435	T436	T437	T438	T439	T440	T441	T442	T443	T444	T445	T446	T447	T448	T449	T450	T451	T452	T453	T454	T455	T456	T457	T458	T459	T460	T461	T462	T463	T464	T465	T466	T467	T468	T469	T470	T471	T472	T473	T474	T475	T476	T477	T478	T479	T480	T481	T482	T483	T484	T485	T486	T487	T488	T489	T490	T491	T492	T493	T494	T495	T496	T497	T498	T499	T500	T501	T502	T503	T504	T505	T506	T507	T508	T509	T510	T511	T512	T513	T514	T515	T516	T517	T518	T519	T520	T521	T522	T523	T524	T525	T526	T527	T528	T529	T530	T531	T532	T533	T534	T535	T536	T537	T538	T539	T540	T541	T542	T543	T544	T545	T546	T547	T548	T549	T550	T551	T552	T553	T554	T555	T556	T557	T558	T559	T560	T561	T562	T563	T564	T565	T566	T567	T568	T569	T570	T571	T572	T573	T574	T575	T576	T577	T578	T579	T580	T581	T582	T583	T584	T585	T586	T587	T588	T589	T590	T591	T592	T593	T594	T595	T596	T597	T598	T599	T600	T601	T602	T603	T604	T605	T606	T607	T608	T609	T610	T611	T612	T613	T614	T615	T616	T617	T618	T619	T620	T621	T622	T623	T624	T625	T626	T627	T628	T629	T630	T631	T632	T633	T634	T635	T636	T637	T638	T639	T640	T641	T642	T643	T644	T645	T646	T647	T648	T649	T650	T651	T652	T653	T654	T655	T656	T657	T658	T659	T660	T661	T662	T663	T664	T665	T666	T667	T668	T669	T670	T671	T672	T673	T674	T675	T676	T677	T678	T679	T680	T681	T682	T683	T684	T685	T686	T687	T688	T689	T690	T691	T692	T693	T694	T695	T696	T697	T698	T699	T700	T701	T702	T703	T704	T705	T706	T707	T708	T709	T710	T711	T712	T713	T714	T715	T716	T717	T718	T719	T720	T721	T722	T723	T724	T725	T726	T727	T728	T729	T730	T731	T732	T733	T734	T735	T736	T737	T738	T739	T740	T741	T742	T743	T744	T745	T746	T747	T748	T749	T750	T751	T752	T753	T754	T755	T756	T757	T758	T759	T760	T761	T762	T763	T764	T765	T766	T767	T768	T769	T770	T771	T772	T773	T774	T775	T776	T777	T778	T779	T780	T781	T782	T783	T784	T785	T786	T787	T788	T789	T790	T791	T792	T793	T794	T795	T796	T797	T798	T799	T800	T801	T802	T803	T804	T805	T806	T807	T808	T809	T810	T811	T812	T813	T814	T815	T816	T817	T818	T819	T820	T821	T822	T823	T824	T825	T826	T827	T828	T829	T830	T831	T832	T833	T834	T835	T836	T837	T838	T839	T840	T841	T842	T843	T844	T845	T846	T847	T848	T849	T850	T851	T852	T853	T854	T855	T856	T857	T858	T859	T860	T861	T862	T863	T864	T865	T866	T867	T868	T869	T870	T871	T872	T873	T874	T875	T876	T877	T878	T879	T880	T881	T882	T883	T884	T885	T886	T887	T888	T889	T890	T891	T892	T893	T894	T895	T896	T897	T898	T899	T900	T901	T902	T903	T904	T905	T906	T907	T908	T909	T910	T911	T912	T913	T914	T915	T916	T917	T918	T919	T920	T921	T922	T923	T924	T925	T926	T927	T928	T929	T930	T931	T932	T933	T934	T935	T936	T937	T938	T939	T940	T941	T942	T943	T944	T945	T946	T947	T948	T949	T950	T951	T952	T953	T954	T955	T956	T957	T958	T959	T960	T961	T962	T963	T964	T965	T966	T967	T968	T969	T970	T971	T972	T973	T974	T975	T976	T977	T978	T979	T980	T981	T982	T983	T984	T985	T986	T987	T988	T989	T990	T991	T992	T993	T994	T995	T996	T997	T998	T999	T1000	T1001	T1002	T1003	T1004	T1005	T1006	T1007	T1008	T1009	T1010	T1011	T1012	T1013	T1014	T1015	T1016	T1017	T1018	T1019	T1020	T1021	T1022	T1023	T1024	T1025	T1026	T1027	T1028	T1029	T1030	T1031	T1032	T1033	T1034	T1035	T1036	T1037	T1038	T1039	T1040	T1041	T1042	T1043	T1044	T1045	T1046	T1047	T1048	T1049	T1050	T1051	T1052	T1053	T1054	T1055	T1056	T1057	T1058	T1059	T1060	T1061	T1062	T1063	T1064	T1065	T1066	T1067	T1068	T1069	T1070	T1071	T1072	T1073	T1074	T1075	T1076	T1077	T1078	T1079	T1080	T1081	T1082	T1083	T1084	T1085	T1086	T1087	T1088	T1089	T1090	T1091	T1092	T1093	T1094	T1095	T1096	T1097	T1098	T1099	T1100	T1101	T1102	T1103	T1104	T1105	T1106	T1107	T1108	T1109	T1110	T1111	T1112	T1113	T1114	T1115	T1116	T1117	T1118	T1119	T1120	T1121	T1122	T1123	T1124	T1125	T1126	T1127	T1128	T1129	T1130	T1131	T1132	T1133	T1134	T1135	T1136	T1137	T1138	T1139	T1140	T1141	T1142	T1143	T1144	T1145	T1146	T1147	T1148	T1149	T1150	T1151	T1152	T1153	T1154	T1155	T1156	T1157	T1158	T1159	T1160	T1161	T1162	T1163	T1164	T1165	T1166	T1167	T1168	T1169	T1170	T1171	T1172	T1173	T1174	T1175	T1176	T1177	T1178	T1179	T1180	T1181	T1182	T1183	T1184	T1185	T1186	T1187	T1188	T1189	T1190	T1191	T1192	T1193	T1194	T1195	T1196	T1197	T1198	T1199	T1200	T1201	T1202	T1203	T1204	T1205	T1206	T1207	T1208	T1209	T1210	T1211	T1212	T1213	T1214	T1215	T1216	T1217	T1218	T1219	T1220	T1221	T1222	T1223	T1224	T1225	T1226	T1227	T1228	T1229	T1230	T1231	T1232	T1233	T1234	T1235	T1236	T1237	T1238	T1239	T1240	T1241	T1242	T1243	T1244	T1245	T1246	T1247	T1248	T1249	T1250	T1251	T1252	T1253	T1254	T1255	T1256	T1257	T1258	T1259	T1260	T1261	T1262	T1263	T1264	T1265	T1266	T1267	T1268	T1269	T1270	T1271	T1272	T1273	T1274	T1275	T1276	T1277	T1278	T1279	T1280	T1281	T1282	T1283	T1284	T1285	T1286	T1287	T1288	T1289	T1290	T1291	T1292	T1293	T1294	T1295	T1296	T1297	T1298	T1299	T1300	T1301	T1302	T1303	T1304	T1305	T1306	T1307	T1308	T1309	T1310	T1311	T1312	T1313	T1314	T1315	T1316	T1317	T1318	T1319	T1320	T1321	T1322	T1323	T1324	T1325	T1326	T1327	T1328	T1329	T1330	T1331	T1332	T1333	T1334	T1335	T1336	T1337	T1338	T1339	T1340	T1341	T1342	T1343	T1344	T1345	T1346	T1347	T1348	T1349	T1350	T1351	T1352	T1353	T1354	T1355	T1356	T1357	T1358	T1359	T1360	T1361	T1362	T1363	T1364	T1365	T1366	T1367	T1368	T1369	T1370	T1371	T1372	T1373	T1374	T1375	T1376	T1377	T1378	T1379	T1380	T1381	T1382	T1383	T1384	T1385	T1386	T1387	T1388	T1389	T1390	T1391	T1392	T1393	T1394	T1395	T1396	T1397	T1398	T1399	T1400	T1401	T1402	T1403	T1404	T1405	T1406	T1407	T1408	T1409	T1410	T1411	T1412	T1413	T1414	T1415	T1416	T1417	T1418	T1419	T1420	T1421	T1422	T1423	T1424	T1425	T1426	T1427	T1428	T1429	T1430	T1431	T1432	T1433	T1434	T1435	T1436	T1437	T1438	T1439	T1440	T1441	T1442	T1443	T1444	T1445	T1446	T1447	T1448	T1449	T1450	T1451	T1452	T1453	T1454	T1455	T1456	T1457	T1458	T1459	T1460	T1461	T1462	T1463	T1464	T1465	T1466	T1467	T1468	T1469	T1470	T1471	T1472	T1473	T1474	T1475	T1476	T1477	T1478	T1479	T1480	T1481	T1482	T1483	T148
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MIN 49A 5TH 1333 CO-AXIAL THERMOCOUPLE SHAKEDOWN TEST 12/10/79-12/12/79

TIME	ALPHA	P0	T0	T01	MACH	PINF	TIME	UINF	RHINF	KEINF
.674	.04	19394.1	2867.1	3457.2	14.01	.0467	97.3	6850.4	1.306E-03	3.547E+06
.677	.04	19411.8	2870.0	3461.1	14.01	.0468	97.4	6854.3	1.306E-03	3.543E+06
.682	.04	19425.0	2873.2	3465.1	14.01	.0468	97.5	6857.4	1.305E-03	3.539E+06
.684	.04	19434.0	2874.4	3469.3	14.01	.0468	97.6	6861.5	1.304E-03	3.535E+06
.690	.04	19454.0	2874.7	3473.6	14.01	.0469	97.8	6865.3	1.304E-03	3.531E+06
.694	.04	19470.0	2883.0	3476.0	14.01	.0469	97.9	6869.1	1.303E-03	3.527E+06
.694	.04	19487.4	2886.4	3482.4	14.01	.0469	98.0	6873.0	1.302E-03	3.523E+06
.702	.04	19506.0	2889.7	3486.9	14.01	.0470	98.1	6876.9	1.302E-03	3.519E+06
.707	.04	19526.0	2893.0	3491.3	14.01	.0470	98.2	6880.7	1.301E-03	3.516E+06
.711	.04	19547.2	2896.3	3495.6	14.01	.0471	98.3	6884.5	1.301E-03	3.513E+06
.715	.04	19569.5	2899.4	3499.8	14.00	.0471	98.4	6888.2	1.300E-03	3.510E+06
.719	.04	19592.6	2902.4	3503.9	14.00	.0471	98.5	6891.7	1.300E-03	3.508E+06
.723	.04	19616.2	2905.2	3507.7	14.00	.0472	98.6	6895.1	1.300E-03	3.506E+06
.727	.04	19640.0	2907.9	3511.3	14.01	.0472	98.7	6898.3	1.300E-03	3.504E+06
.731	.04	19663.6	2910.4	3514.7	14.01	.0473	98.8	6901.2	1.300E-03	3.503E+06
.736	.04	19686.5	2912.6	3517.9	14.01	.0473	98.9	6904.0	1.300E-03	3.502E+06
.740	.04	19708.4	2914.7	3520.8	14.01	.0474	99.0	6906.5	1.301E-03	3.502E+06
.744	.04	19724.0	2916.6	3523.4	14.01	.0474	99.0	6908.8	1.301E-03	3.502E+06
.748	.04	19747.9	2918.3	3525.8	14.00	.0475	99.1	6910.9	1.301E-03	3.502E+06
.752	.04	19779.9	2921.4	3528.0	14.00	.0475	99.1	6912.9	1.302E-03	3.502E+06
.756	.04	19792.9	2922.8	3530.1	14.00	.0476	99.2	6914.6	1.302E-03	3.502E+06
.761	.04	19803.8	2924.1	3533.6	14.00	.0476	99.3	6916.4	1.303E-03	3.502E+06
.765	.04	19812.9	2925.4	3535.6	14.00	.0477	99.4	6917.9	1.303E-03	3.501E+06
.769	.04	19820.5	2926.8	3537.4	14.00	.0477	99.4	6919.4	1.304E-03	3.500E+06
.773	.04	19824.5	2928.1	3539.2	14.00	.0478	99.5	6920.9	1.304E-03	3.500E+06
.777	.04	19831.6	2929.6	3541.1	14.00	.0478	99.6	6922.5	1.304E-03	3.499E+06
.781	.04	19836.1	2931.1	3543.0	13.99	.0479	99.7	6924.0	1.304E-03	3.497E+06
.785	.04	19840.3	2932.7	3545.1	13.99	.0479	99.7	6925.5	1.304E-03	3.496E+06
.790	.04	19844.8	2934.4	3547.3	13.99	.0479	99.8	6926.9	1.305E-03	3.494E+06
.794	.04	19849.7	2936.1	3549.6	13.99	.0500	99.9	6928.4	1.305E-03	3.492E+06
.798	.04	19855.5	2938.0	3552.0	13.99	.0500	100.0	6929.5	1.305E-03	3.490E+06
.802	.04	19862.2	2939.9	3554.5	13.99	.0501	100.1	6930.6	1.304E-03	3.488E+06
.806	.04	19870.2	2941.9	3557.1	13.98	.0501	100.1	6931.7	1.304E-03	3.486E+06
.810	.04	19879.4	2943.9	3559.7	13.98	.0501	100.2	6932.8	1.304E-03	3.484E+06
.814	.04	19889.9	2945.9	3562.5	13.98	.0502	100.3	6933.9	1.304E-03	3.482E+06
.818	.04	19891.6	2948.0	3565.2	13.98	.0502	100.4	6934.9	1.304E-03	3.481E+06
.822	.04	19914.3	2950.0	3567.9	13.98	.0502	100.5	6935.9	1.304E-03	3.479E+06
.826	.04	19927.8	2952.0	3570.6	13.98	.0503	100.5	6936.9	1.303E-03	3.477E+06
.830	.04	19941.7	2954.0	3573.3	13.98	.0503	100.6	6937.9	1.303E-03	3.475E+06
.834	.07	19955.9	2955.9	3575.9	13.98	.0503	100.7	6938.9	1.303E-03	3.473E+06
.838	.07	19970.0	2957.8	3578.5	13.98	.0504	100.7	6939.9	1.303E-03	3.471E+06
.842	.07	19983.7	2959.7	3581.0	13.98	.0504	100.8	6940.9	1.302E-03	3.469E+06
.846	.07	19996.7	2961.4	3583.4	13.98	.0504	100.8	6941.9	1.302E-03	3.468E+06
.850	.04	20008.8	2963.2	3585.8	13.98	.0504	100.9	6942.9	1.301E-03	3.466E+06
.854	.04	20019.6	2964.8	3588.0	13.98	.0504	100.9	6943.9	1.301E-03	3.464E+06
.858	.07	20024.2	2966.3	3590.0	13.98	.0504	101.0	6944.9	1.300E-03	3.462E+06
.862	.07	20037.3	2967.8	3592.0	13.98	.0504	101.0	6945.9	1.300E-03	3.460E+06
.866	.07	20043.9	2969.1	3593.7	13.98	.0504	101.1	6946.9	1.299E-03	3.458E+06
.870	.07	20049.1	2970.3	3595.3	13.98	.0504	101.1	6947.9	1.299E-03	3.456E+06
.874	.06	20053.0	2971.4	3596.8	13.98	.0504	101.1	6948.9	1.298E-03	3.454E+06
.878	.06	20055.5	2972.4	3598.0	13.98	.0504	101.2	6949.9	1.298E-03	3.452E+06
.882	.06	20057.0	2973.2	3599.1	13.98	.0504	101.2	6950.9	1.298E-03	3.450E+06
.886	.05	20057.6	2973.9	3600.0	13.98	.0504	101.2	6951.9	1.297E-03	3.448E+06
.890	.04	20057.5	2974.5	3600.7	13.98	.0504	101.2	6952.9	1.297E-03	3.446E+06
.894	.04	20057.0	2975.0	3601.4	13.98	.0504	101.3	6953.9	1.297E-03	3.444E+06
.898	.04	19801.7	2930.8	3542.3	13.99	.0478	99.6	6965.1	1.302E-03	3.491E+06

AVERAGE

MIN	49s	WTR	1333	CO-AXIAL THERMOCOUPLE	SHARPDOWN	TLSI	12/10/79-12/12/79	T3	T4	T4	T4	T4	T4	T5	T5	T5
TIME	ALPHA	G1	QUOT	G2	QUOT	G3	QUOT	T1	T2	T1	T2	T2	T2	T3	T4	T5
0.73	0.06	3.933	3.721	3.721	3.721	3.721	3.721	178.26	115.53	178.26	115.53	26.693	26.693	76.94	76.94	4.264
0.77	0.06	3.936	3.722	3.722	3.722	3.722	3.722	178.97	115.75	178.97	115.75	26.694	26.694	76.97	76.97	4.255
0.81	0.06	3.938	3.723	3.723	3.723	3.723	3.723	179.68	116.03	179.68	116.03	26.713	26.713	77.01	77.01	4.268
0.90	0.06	3.941	3.724	3.724	3.724	3.724	3.724	180.24	116.24	180.24	116.24	26.721	26.721	77.04	77.04	4.273
0.94	0.06	3.942	3.724	3.724	3.724	3.724	3.724	180.95	116.52	180.95	116.52	26.758	26.758	77.12	77.12	4.285
0.96	0.06	3.944	3.723	3.723	3.723	3.723	3.723	181.66	116.81	181.66	116.81	26.694	26.694	77.17	77.17	4.283
0.99	0.06	3.945	3.722	3.722	3.722	3.722	3.722	182.23	117.09	182.23	117.09	26.711	26.711	77.18	77.18	4.286
1.02	0.06	3.945	3.721	3.721	3.721	3.721	3.721	182.93	117.30	182.93	117.30	26.739	26.739	77.25	77.25	4.284
1.07	0.06	3.946	3.720	3.720	3.720	3.720	3.720	183.64	117.51	183.64	117.51	26.758	26.758	77.31	77.31	4.286
1.11	0.06	3.946	3.719	3.719	3.719	3.719	3.719	184.21	117.73	184.21	117.73	26.761	26.761	77.32	77.32	4.286
1.15	0.06	3.947	3.717	3.717	3.717	3.717	3.717	184.91	118.01	184.91	118.01	26.774	26.774	77.35	77.35	4.285
1.19	0.06	3.947	3.716	3.716	3.716	3.716	3.716	185.48	118.22	185.48	118.22	26.797	26.797	77.42	77.42	4.287
1.23	0.06	3.947	3.715	3.715	3.715	3.715	3.715	186.05	118.51	186.05	118.51	26.828	26.828	77.48	77.48	4.290
1.27	0.06	3.947	3.713	3.713	3.713	3.713	3.713	186.75	118.72	186.75	118.72	26.853	26.853	77.49	77.49	4.285
1.31	0.06	3.947	3.712	3.712	3.712	3.712	3.712	187.32	119.00	187.32	119.00	26.910	26.910	77.51	77.51	4.291
1.34	0.06	3.947	3.712	3.712	3.712	3.712	3.712	187.89	119.28	187.89	119.28	26.857	26.857	77.58	77.58	4.283
1.40	0.06	3.947	3.711	3.711	3.711	3.711	3.711	188.45	119.50	188.45	119.50	26.898	26.898	77.62	77.62	4.287
1.44	0.06	3.947	3.711	3.711	3.711	3.711	3.711	189.04	119.71	189.04	119.71	26.943	26.943	77.65	77.65	4.294
1.49	0.06	3.947	3.711	3.711	3.711	3.711	3.711	189.67	120.20	189.67	120.20	26.929	26.929	77.75	77.75	4.294
1.53	0.06	3.947	3.712	3.712	3.712	3.712	3.712	190.43	120.44	190.43	120.44	26.941	26.941	77.79	77.79	4.291
1.58	0.06	3.947	3.712	3.712	3.712	3.712	3.712	191.00	120.66	191.00	120.66	26.947	26.947	77.80	77.80	4.297
1.61	0.06	3.950	3.713	3.713	3.713	3.713	3.713	191.71	120.77	191.71	120.77	26.973	26.973	77.83	77.83	4.297
1.65	0.06	3.951	3.714	3.714	3.714	3.714	3.714	192.27	120.98	192.27	120.98	26.993	26.993	77.89	77.89	4.301
1.69	0.06	3.952	3.717	3.717	3.717	3.717	3.717	192.70	121.14	192.70	121.14	26.935	26.935	77.96	77.96	4.312
1.73	0.06	3.953	3.722	3.722	3.722	3.722	3.722	193.41	121.41	193.41	121.41	26.950	26.950	77.99	77.99	4.313
1.78	0.06	3.953	3.722	3.722	3.722	3.722	3.722	193.83	121.62	193.83	121.62	26.943	26.943	77.99	77.99	4.313
1.81	0.06	3.953	3.725	3.725	3.725	3.725	3.725	194.54	121.83	194.54	121.83	26.921	26.921	78.04	78.04	4.314
1.86	0.06	3.954	3.726	3.726	3.726	3.726	3.726	195.10	122.04	195.10	122.04	26.947	26.947	78.04	78.04	4.314
1.90	0.06	3.954	3.727	3.727	3.727	3.727	3.727	195.53	122.26	195.53	122.26	26.944	26.944	78.12	78.12	4.314
1.94	0.06	3.954	3.736	3.736	3.736	3.736	3.736	196.10	122.55	196.10	122.55	26.946	26.946	78.12	78.12	4.314
1.98	0.06	3.961	3.741	3.741	3.741	3.741	3.741	196.80	122.75	196.80	122.75	26.971	26.971	78.14	78.14	4.331
2.02	0.06	3.971	3.746	3.746	3.746	3.746	3.746	197.37	123.03	197.37	123.03	26.948	26.948	78.21	78.21	4.331
2.06	0.06	3.974	3.750	3.750	3.750	3.750	3.750	197.79	123.14	197.79	123.14	27.005	27.005	78.26	78.26	4.331
2.10	0.06	3.976	3.751	3.751	3.751	3.751	3.751	198.36	123.34	198.36	123.34	27.026	27.026	78.29	78.29	4.336
2.14	0.06	3.982	3.751	3.751	3.751	3.751	3.751	199.07	123.67	199.07	123.67	27.044	27.044	78.30	78.30	4.336
2.19	0.06	3.987	3.756	3.756	3.756	3.756	3.756	199.63	123.88	199.63	123.88	27.048	27.048	78.36	78.36	4.347
2.23	0.06	3.992	3.771	3.771	3.771	3.771	3.771	200.20	124.10	200.20	124.10	27.067	27.067	78.41	78.41	4.336
2.27	0.06	3.996	3.776	3.776	3.776	3.776	3.776	200.77	124.34	200.77	124.34	27.075	27.075	78.43	78.43	4.347
2.31	0.06	4.002	3.781	3.781	3.781	3.781	3.781	201.47	124.54	201.47	124.54	27.098	27.098	78.46	78.46	4.347
2.35	0.07	4.007	3.786	3.786	3.786	3.786	3.786	202.04	124.80	202.04	124.80	27.097	27.097	78.51	78.51	4.357
2.40	0.07	4.012	3.791	3.791	3.791	3.791	3.791	202.61	125.02	202.61	125.02	27.091	27.091	78.57	78.57	4.357
2.44	0.07	4.014	3.794	3.794	3.794	3.794	3.794	203.17	125.23	203.17	125.23	27.108	27.108	78.57	78.57	4.355
2.48	0.07	4.023	3.800	3.800	3.800	3.800	3.800	203.60	125.44	203.60	125.44	27.114	27.114	78.60	78.60	4.361
2.52	0.07	4.034	3.804	3.804	3.804	3.804	3.804	204.16	125.74	204.16	125.74	27.148	27.148	78.65	78.65	4.373
2.56	0.08	4.034	3.811	3.811	3.811	3.811	3.811	204.73	126.00	204.73	126.00	27.061	27.061	78.71	78.71	4.367
2.60	0.07	4.043	3.814	3.814	3.814	3.814	3.814	205.29	126.36	205.29	126.36	27.073	27.073	78.72	78.72	4.367
2.64	0.07	4.043	3.817	3.817	3.817	3.817	3.817	205.86	126.56	205.86	126.56	27.077	27.077	78.77	78.77	4.374
2.69	0.07	4.051	3.814	3.814	3.814	3.814	3.814	206.47	126.71	206.47	126.71	27.094	27.094	78.81	78.81	4.384
2.73	0.07	4.054	3.821	3.821	3.821	3.821	3.821	207.24	126.93	207.24	126.93	27.092	27.092	78.85	78.85	4.384
2.77	0.07	4.056	3.822	3.822	3.822	3.822	3.822	207.48	127.14	207.48	127.14	27.094	27.094	78.88	78.88	4.384
2.81	0.06	4.057	3.824	3.824	3.824	3.824	3.824	207.55	127.34	207.55	127.34	27.113	27.113	78.91	78.91	4.394
2.85	0.05	4.057	3.824	3.824	3.824	3.824	3.824	208.12	127.49	208.12	127.49	27.094	27.094	79.01	79.01	4.394
2.89	0.05	4.057	3.824	3.824	3.824	3.824	3.824	208.54	127.60	208.54	127.60	27.121	27.121	79.01	79.01	4.394
2.94	0.04	4.054	3.824	3.824	3.824	3.824	3.824	209.11	127.99	209.11	127.99	27.092	27.092	79.05	79.05	4.394
2.98	0.04	4.050	3.824	3.824	3.824	3.824	3.824	210.67	128.13	210.67	128.13	27.078	27.078	79.11	79.11	4.385

CO-AXIAL THERMOCOUPLE SHARPENING TEST 12/10/79-12/12/79

TIME	ALPHA	WTH 1333	CO-AXIAL	TOL	MACH	PINF	TINF	RHOINF	REINF
1.06	.04	20056.1	2975.4	3601.9	13.98	.0504	7016.7	1.297E-03	3.447E+06
1.10	.04	20055.3	2975.8	3602.4	13.98	.0504	7017.1	1.297E-03	3.446E+06
1.14	.05	20055.5	2976.2	3602.9	13.98	.0504	7017.5	1.297E-03	3.446E+06
1.18	.04	20054.1	2976.6	3603.4	13.98	.0504	7017.9	1.297E-03	3.445E+06
1.22	.04	20054.2	2977.1	3603.9	13.98	.0504	7018.4	1.297E-03	3.445E+06
1.26	.11	20054.8	2977.6	3604.7	13.98	.0505	7019.0	1.297E-03	3.444E+06
1.30	.14	20056.0	2978.2	3605.5	13.98	.0505	7019.7	1.297E-03	3.444E+06
1.34	.19	20056.0	2979.0	3606.5	13.98	.0505	7020.5	1.297E-03	3.443E+06
1.38	.24	20060.7	2979.8	3607.6	13.98	.0505	7021.5	1.297E-03	3.443E+06
1.42	.31	20066.1	2980.8	3608.6	13.97	.0505	7022.5	1.297E-03	3.442E+06
1.46	.34	20067.1	2981.8	3610.2	13.97	.0506	7023.7	1.297E-03	3.441E+06
1.50	.47	20072.6	2982.9	3611.7	13.97	.0506	7025.0	1.297E-03	3.440E+06
1.54	.57	20077.6	2984.1	3613.2	13.97	.0506	7026.3	1.297E-03	3.438E+06
1.58	.64	20082.8	2985.3	3614.8	13.97	.0506	7027.7	1.297E-03	3.437E+06
1.62	.80	20088.2	2986.5	3616.4	13.97	.0506	7029.0	1.297E-03	3.436E+06
1.66	.93	20093.5	2987.6	3617.8	13.97	.0507	7030.3	1.297E-03	3.435E+06
1.70	1.07	20098.5	2988.6	3619.2	13.97	.0507	7031.5	1.296E-03	3.433E+06
1.74	1.63	20103.2	2989.6	3620.5	13.97	.0507	7032.6	1.296E-03	3.432E+06
1.78	1.39	20107.2	2990.4	3621.6	13.97	.0507	7033.7	1.296E-03	3.431E+06
1.82	1.56	20110.5	2991.0	3622.5	13.97	.0507	7034.3	1.295E-03	3.430E+06
1.86	1.74	20112.9	2991.6	3623.2	13.97	.0507	7034.9	1.295E-03	3.429E+06
1.90	1.93	20116.3	2991.9	3623.7	13.97	.0507	7035.4	1.295E-03	3.429E+06
1.94	2.13	20119.5	2992.2	3624.0	13.97	.0507	7035.5	1.295E-03	3.428E+06
1.98	2.34	20113.6	2992.3	3624.1	13.97	.0507	7035.6	1.295E-03	3.428E+06
2.02	2.55	20111.5	2992.2	3624.0	13.97	.0507	7035.4	1.295E-03	3.427E+06
2.06	2.77	20104.1	2992.1	3623.8	13.97	.0507	7035.4	1.295E-03	3.427E+06
2.10	3.00	20103.6	2992.0	3623.6	13.97	.0506	7035.2	1.294E-03	3.427E+06
2.14	3.23	20097.9	2991.7	3623.2	13.97	.0506	7034.9	1.294E-03	3.426E+06
2.18	3.47	20091.1	2991.5	3622.8	13.97	.0506	7034.5	1.294E-03	3.426E+06
2.22	3.72	20083.5	2991.3	3622.4	13.97	.0506	7034.2	1.294E-03	3.425E+06
2.26	3.97	20075.0	2991.0	3622.0	13.97	.0506	7033.8	1.294E-03	3.425E+06
2.30	4.23	20065.9	2990.9	3621.7	13.97	.0506	7033.5	1.294E-03	3.424E+06
2.34	4.50	20056.3	2990.8	3621.4	13.97	.0506	7033.3	1.294E-03	3.423E+06
2.38	4.77	20046.3	2990.7	3621.2	13.96	.0506	7033.1	1.294E-03	3.423E+06
2.42	5.05	20036.1	2990.7	3621.1	13.96	.0506	7033.0	1.293E-03	3.421E+06
2.46	5.34	20025.8	2990.9	3621.1	13.96	.0506	7033.0	1.293E-03	3.420E+06
2.50	5.63	20015.6	2991.0	3621.2	13.96	.0506	7033.1	1.293E-03	3.419E+06
2.54	5.93	20005.5	2991.3	3621.4	13.96	.0506	7033.2	1.293E-03	3.417E+06
2.58	6.23	19995.6	2991.6	3621.7	13.96	.0506	7033.4	1.292E-03	3.416E+06
2.62	6.53	19986.1	2991.9	3622.0	13.96	.0506	7033.7	1.292E-03	3.414E+06
2.66	6.84	19976.9	2992.3	3622.3	13.96	.0506	7033.9	1.292E-03	3.413E+06
2.70	7.14	19966.0	2992.6	3622.6	13.95	.0506	7034.2	1.291E-03	3.411E+06
2.74	7.47	19954.5	2992.9	3622.9	13.95	.0506	7034.4	1.291E-03	3.409E+06
2.78	7.79	19951.2	2993.1	3623.1	13.95	.0506	7034.6	1.290E-03	3.407E+06
2.82	8.11	19943.2	2993.3	3623.2	13.95	.0506	7034.6	1.290E-03	3.406E+06
2.86	8.43	19935.4	2993.3	3623.1	13.95	.0506	7034.6	1.289E-03	3.404E+06
2.90	8.74	19927.7	2993.2	3622.9	13.95	.0505	7034.4	1.289E-03	3.403E+06
2.94	9.07	19920.0	2993.0	3622.5	13.95	.0505	7034.0	1.288E-03	3.402E+06
2.98	9.40	19912.2	2992.6	3621.9	13.95	.0505	7033.5	1.288E-03	3.401E+06
3.02	9.72	19904.2	2992.1	3621.1	13.95	.0504	7032.9	1.287E-03	3.400E+06
3.06	10.04	19896.0	2991.4	3620.1	13.95	.0504	7032.0	1.286E-03	3.399E+06
3.10	10.36	19887.4	2990.6	3619.0	13.96	.0504	7031.1	1.286E-03	3.399E+06
3.14	10.68	19878.3	2989.6	3617.7	13.96	.0503	7029.9	1.285E-03	3.398E+06
3.18	10.99	19868.8	2988.6	3616.3	13.96	.0503	7028.7	1.285E-03	3.398E+06
3.22	11.31	19858.8	2987.5	3614.8	13.96	.0502	7027.5	1.285E-03	3.398E+06
3.26	11.62	19848.2	2986.5	3613.2	13.96	.0502	7026.2	1.284E-03	3.398E+06
AVERAGE		20026.2	2988.2	3617.7	13.97	.0506	7030.1	1.293E-03	3.424E+06

MIN	WTR	WTR 1333	CU-AXIAL THERMOCOUPLE	SHARF-OWN	T-51	12/10/79-12/12/79	T3 TM	T3 QUOT	T4 TM	T4 QUOT	T5 TM	T5 QUOT
1.004	0.04	4.044	3.823	3.806	211.10	67.043	128.34	27.119	79.06	4.386	79.06	4.386
1.010	0.04	4.036	3.822	3.806	211.01	66.475	128.62	27.063	79.06	4.375	79.16	4.394
1.014	0.05	4.027	3.821	3.839	212.23	66.132	128.77	27.051	79.11	4.368	79.16	4.391
1.018	0.06	4.014	3.820	3.858	212.80	66.066	128.91	27.044	79.17	4.367	79.25	4.396
1.023	0.08	4.001	3.819	3.879	213.36	66.066	129.12	27.035	79.21	4.363	79.29	4.405
1.027	0.11	3.984	3.818	3.902	213.79	67.100	129.40	27.054	79.21	4.366	79.29	4.425
1.031	0.14	3.965	3.817	3.927	214.21	68.403	129.62	26.927	79.26	4.341	79.32	4.427
1.033	0.19	3.943	3.817	3.953	214.78	68.980	129.76	26.882	79.30	4.334	79.37	4.443
1.034	0.24	3.914	3.816	3.982	215.34	67.040	129.90	26.821	79.33	4.314	79.42	4.460
1.037	0.31	3.890	3.816	4.012	215.77	67.079	130.11	26.716	79.33	4.298	79.45	4.485
1.040	0.38	3.855	3.816	4.044	216.33	67.241	130.32	26.663	79.36	4.279	79.46	4.527
1.043	0.47	3.825	3.816	4.079	216.76	67.157	130.39	26.507	79.41	4.230	79.53	4.544
1.046	0.56	3.784	3.817	4.124	217.47	67.314	130.61	26.424	79.44	4.199	79.60	4.588
1.049	0.68	3.747	3.819	4.175	218.15	67.416	130.75	26.282	79.44	4.162	79.62	4.628
1.054	0.80	3.703	3.821	4.232	218.32	67.616	130.89	26.163	79.44	4.122	79.66	4.680
1.057	0.93	3.656	3.824	4.299	218.88	67.497	130.96	25.991	79.48	4.063	79.73	4.730
1.061	1.07	3.605	3.827	4.367	219.45	67.874	131.03	25.857	79.50	4.012	79.80	4.791
1.064	1.23	3.551	3.832	4.434	220.01	68.019	131.17	25.695	79.50	3.962	79.84	4.854
1.068	1.39	3.493	3.837	4.502	220.58	68.368	131.31	25.579	79.48	3.919	79.88	4.930
1.071	1.56	3.432	3.842	4.569	221.29	68.416	131.46	25.434	79.51	3.848	79.98	4.989
1.074	1.74	3.368	3.849	4.636	221.85	68.686	131.60	25.282	79.51	3.786	80.05	5.065
1.077	1.93	3.301	3.856	4.703	222.42	68.948	131.74	25.130	79.47	3.722	80.08	5.144
1.080	2.13	3.232	3.863	4.769	222.99	69.242	131.88	24.986	79.47	3.664	80.17	5.227
1.083	2.34	3.159	3.874	4.836	223.55	69.473	131.94	24.822	79.47	3.605	80.27	5.310
1.086	2.55	3.084	3.883	4.903	224.12	69.686	131.81	24.600	79.47	3.539	80.37	5.404
1.089	2.77	3.006	3.894	4.969	224.68	69.914	131.88	24.419	79.45	3.485	80.44	5.514
1.092	3.00	2.926	3.905	5.035	225.25	70.055	131.95	24.219	79.44	3.436	80.51	5.623
1.094	3.23	2.845	3.917	5.101	225.81	70.098	131.95	24.000	79.45	3.389	80.61	5.716
1.097	3.47	2.762	3.929	5.167	226.38	70.237	132.09	23.820	79.45	3.300	80.72	5.822
1.100	3.72	2.677	3.942	5.233	226.94	70.380	132.17	23.648	79.40	3.238	80.79	5.950
1.103	3.97	2.591	3.956	5.300	227.52	70.502	132.24	23.486	79.40	3.171	80.88	6.073
1.106	4.23	2.505	3.969	5.367	228.10	70.616	132.31	23.324	79.40	3.104	81.00	6.204
1.109	4.50	2.418	3.983	5.434	228.68	70.740	132.38	23.162	79.40	3.037	81.14	6.326
1.112	4.77	2.331	3.994	5.501	229.26	70.864	132.45	22.999	79.40	2.970	81.30	6.479
1.115	5.05	2.244	4.007	5.568	229.84	70.988	132.52	22.837	79.40	2.903	81.36	6.615
1.118	5.34	2.157	4.020	5.635	230.42	71.112	132.59	22.675	79.40	2.836	81.48	6.774
1.121	5.63	2.070	4.033	5.702	231.00	71.236	132.66	22.513	79.40	2.769	81.64	6.939
1.124	5.93	1.983	4.046	5.769	231.58	71.360	132.73	22.351	79.40	2.702	81.75	7.101
1.127	6.23	1.905	4.059	5.836	232.16	71.484	132.80	22.189	79.40	2.635	81.88	7.281
1.130	6.53	1.824	4.072	5.903	232.74	71.608	132.87	22.027	79.40	2.568	82.06	7.487
1.133	6.84	1.745	4.085	5.969	233.32	71.732	132.94	21.865	79.40	2.501	82.25	7.722
1.136	7.15	1.669	4.098	6.036	233.90	71.856	133.01	21.703	79.40	2.434	82.38	7.989
1.139	7.47	1.596	4.124	6.103	234.48	71.980	133.08	21.541	79.40	2.367	82.53	8.280
1.142	7.79	1.526	4.136	6.169	235.06	72.104	133.15	21.379	79.40	2.300	82.74	8.514
1.145	8.11	1.454	4.148	6.236	235.64	72.228	133.22	21.217	79.40	2.233	82.94	8.754
1.148	8.43	1.381	4.160	6.302	236.22	72.352	133.29	21.055	79.40	2.166	83.10	8.985
1.151	8.75	1.307	4.172	6.368	236.80	72.476	133.36	20.893	79.40	2.099	83.30	9.249
1.154	9.07	1.234	4.184	6.434	237.38	72.600	133.43	20.731	79.40	2.032	83.48	9.527
1.157	9.39	1.161	4.196	6.500	237.96	72.724	133.50	20.569	79.40	1.965	83.78	9.817
1.160	9.71	1.088	4.208	6.566	238.54	72.848	133.57	20.407	79.40	1.898	84.14	10.143
1.163	10.04	1.015	4.220	6.632	239.12	72.972	133.64	20.245	79.40	1.831	84.47	10.494
1.166	10.36	0.942	4.232	6.698	239.70	73.096	133.71	20.083	79.40	1.764	84.74	10.833
1.169	10.68	0.869	4.244	6.764	240.28	73.220	133.78	19.921	79.40	1.697	84.94	11.154
1.172	10.99	0.796	4.256	6.830	240.86	73.344	133.85	19.759	79.40	1.630	85.26	11.523
1.175	11.31	0.723	4.268	6.896	241.44	73.468	133.92	19.597	79.40	1.563	85.56	11.844
1.178	11.62	0.650	4.280	6.962	242.02	73.592	134.00	19.435	79.40	1.496	85.86	12.165

TIME	ALPHA	WTH 1333	CU-AXIAL THERMOUPLE SHAKEDOWN TEST	12/10/79-12/12/79	TIME	TIME	TIME	TIME	TIME
1.134	11.93	19637.0	2984.4	3611.7	13.46	0.502	101.9	7024.9	1.244E-03
1.143	12.24	19825.3	2984.3	3610.3	13.46	0.501	101.4	7023.6	1.283E-03
1.147	12.55	19813.0	2983.4	3608.9	13.46	0.501	101.4	7022.4	1.283E-03
1.151	12.55	19800.2	2982.5	3607.6	13.46	0.501	101.8	7021.4	1.283E-03
1.154	13.14	19787.0	2981.8	3606.5	13.46	0.501	101.7	7020.4	1.283E-03
1.160	13.46	19773.3	2981.2	3605.6	13.46	0.500	101.7	7019.4	1.282E-03
1.164	13.74	19759.3	2980.7	3604.8	13.46	0.500	101.7	7018.4	1.282E-03
1.168	14.04	19744.9	2980.3	3604.1	13.46	0.500	101.7	7017.4	1.282E-03
1.172	14.34	19730.3	2980.1	3603.6	13.45	0.500	101.7	7017.5	1.282E-03
1.176	14.63	19715.4	2979.8	3603.1	13.45	0.500	101.7	7017.3	1.281E-03
1.180	14.92	19700.3	2979.6	3602.6	13.45	0.500	101.7	7016.9	1.281E-03
1.184	15.20	19684.9	2979.3	3602.0	13.45	0.500	101.7	7016.3	1.280E-03
1.188	15.47	19669.3	2979.0	3601.2	13.45	0.499	101.7	7015.7	1.280E-03
1.192	15.74	19653.5	2978.2	3600.2	13.45	0.499	101.7	7015.4	1.279E-03
1.197	15.99	19637.6	2977.2	3598.8	13.45	0.499	101.7	7013.6	1.279E-03
1.201	16.24	19621.3	2975.9	3596.9	13.45	0.498	101.6	7012.0	1.278E-03
1.205	16.44	19604.9	2974.2	3594.6	13.45	0.498	101.6	7009.9	1.278E-03
1.209	16.70	19588.3	2972.0	3591.6	13.45	0.497	101.5	7007.4	1.277E-03
1.214	16.91	19571.4	2969.3	3587.9	13.45	0.496	101.3	7007.2	1.277E-03
1.218	17.11	19554.4	2966.0	3583.5	13.46	0.496	101.2	7000.4	1.277E-03
1.222	17.40	19537.3	2962.1	3578.3	13.46	0.495	101.0	6999.0	1.276E-03
1.226	17.64	19520.1	2957.6	3572.3	13.46	0.494	100.8	6996.0	1.276E-03
1.230	17.81	19502.9	2952.4	3565.6	13.47	0.493	100.6	6985.1	1.277E-03
1.234	17.74	19485.7	2946.7	3558.2	13.47	0.491	100.3	6978.7	1.277E-03
1.238	17.86	19468.7	2940.4	3550.0	13.48	0.490	100.1	6971.6	1.277E-03
1.242	17.96	19451.8	2933.6	3541.2	13.48	0.489	99.8	6964.0	1.278E-03
1.246	18.04	19435.3	2926.3	3531.0	13.49	0.488	99.5	6965.9	1.280E-03
1.250	18.11	19419.1	2919.5	3521.8	13.49	0.487	99.1	6947.3	1.281E-03
1.254	18.16	19403.3	2910.5	3511.5	14.00	0.486	98.8	6938.4	1.282E-03
1.258	18.19	19387.9	2902.1	3500.8	14.01	0.485	98.4	6929.1	1.284E-03
1.262	18.21	19373.0	2893.5	3489.8	14.01	0.484	98.1	6919.5	1.286E-03
AVERAGE		19614.7	2961.7	3578.9	13.47	0.496	101.0	6996.4	1.280E-03

[illegible]

[illegible]

TIME	ALPHA	WTP 1333	STATION NUMBERS	LO-AXIAL	THE-MUCOUPLT	SHAREDOW	TEST	12/10/79-12/12/79
TIME	ALPHA	WTP 1333	STATION NUMBERS	LO-AXIAL	THE-MUCOUPLT	SHAREDOW	TEST	12/10/79-12/12/79
155	.673	.06	5.210E-04	4.930E-04	4.930E-04	4.930E-04	5.594E-04	5.594E-04
156	.677	.06	5.208E-04	4.928E-04	4.928E-04	4.928E-04	5.592E-04	5.592E-04
157	.682	.06	5.205E-04	4.925E-04	4.925E-04	4.925E-04	5.589E-04	5.589E-04
158	.686	.06	5.201E-04	4.921E-04	4.921E-04	4.921E-04	5.585E-04	5.585E-04
159	.690	.06	5.197E-04	4.917E-04	4.917E-04	4.917E-04	5.581E-04	5.581E-04
160	.694	.06	5.192E-04	4.912E-04	4.912E-04	4.912E-04	5.577E-04	5.577E-04
161	.698	.06	5.188E-04	4.908E-04	4.908E-04	4.908E-04	5.573E-04	5.573E-04
162	.702	.06	5.184E-04	4.904E-04	4.904E-04	4.904E-04	5.569E-04	5.569E-04
163	.707	.06	5.179E-04	4.899E-04	4.899E-04	4.899E-04	5.564E-04	5.564E-04
164	.711	.06	5.175E-04	4.895E-04	4.895E-04	4.895E-04	5.560E-04	5.560E-04
165	.715	.06	5.171E-04	4.891E-04	4.891E-04	4.891E-04	5.556E-04	5.556E-04
166	.719	.06	5.167E-04	4.887E-04	4.887E-04	4.887E-04	5.552E-04	5.552E-04
167	.723	.06	5.163E-04	4.883E-04	4.883E-04	4.883E-04	5.548E-04	5.548E-04
168	.727	.06	5.159E-04	4.879E-04	4.879E-04	4.879E-04	5.544E-04	5.544E-04
169	.731	.06	5.155E-04	4.875E-04	4.875E-04	4.875E-04	5.540E-04	5.540E-04
170	.734	.06	5.151E-04	4.871E-04	4.871E-04	4.871E-04	5.536E-04	5.536E-04
171	.740	.06	5.147E-04	4.867E-04	4.867E-04	4.867E-04	5.532E-04	5.532E-04
172	.744	.06	5.143E-04	4.863E-04	4.863E-04	4.863E-04	5.528E-04	5.528E-04
173	.748	.06	5.139E-04	4.859E-04	4.859E-04	4.859E-04	5.524E-04	5.524E-04
174	.752	.06	5.135E-04	4.855E-04	4.855E-04	4.855E-04	5.520E-04	5.520E-04
175	.756	.06	5.131E-04	4.851E-04	4.851E-04	4.851E-04	5.516E-04	5.516E-04
176	.761	.06	5.127E-04	4.847E-04	4.847E-04	4.847E-04	5.512E-04	5.512E-04
177	.765	.06	5.123E-04	4.843E-04	4.843E-04	4.843E-04	5.508E-04	5.508E-04
178	.769	.06	5.119E-04	4.839E-04	4.839E-04	4.839E-04	5.504E-04	5.504E-04
179	.773	.06	5.115E-04	4.835E-04	4.835E-04	4.835E-04	5.500E-04	5.500E-04
180	.777	.06	5.111E-04	4.831E-04	4.831E-04	4.831E-04	5.496E-04	5.496E-04
181	.781	.06	5.107E-04	4.827E-04	4.827E-04	4.827E-04	5.492E-04	5.492E-04
182	.785	.06	5.103E-04	4.823E-04	4.823E-04	4.823E-04	5.488E-04	5.488E-04
183	.790	.06	5.099E-04	4.819E-04	4.819E-04	4.819E-04	5.484E-04	5.484E-04
184	.794	.06	5.095E-04	4.815E-04	4.815E-04	4.815E-04	5.480E-04	5.480E-04
185	.802	.06	5.091E-04	4.811E-04	4.811E-04	4.811E-04	5.476E-04	5.476E-04
186	.806	.06	5.087E-04	4.807E-04	4.807E-04	4.807E-04	5.472E-04	5.472E-04
187	.810	.06	5.083E-04	4.803E-04	4.803E-04	4.803E-04	5.468E-04	5.468E-04
188	.814	.06	5.079E-04	4.799E-04	4.799E-04	4.799E-04	5.464E-04	5.464E-04
189	.818	.06	5.075E-04	4.795E-04	4.795E-04	4.795E-04	5.460E-04	5.460E-04
190	.823	.06	5.071E-04	4.791E-04	4.791E-04	4.791E-04	5.456E-04	5.456E-04
191	.827	.06	5.067E-04	4.787E-04	4.787E-04	4.787E-04	5.452E-04	5.452E-04
192	.831	.06	5.063E-04	4.783E-04	4.783E-04	4.783E-04	5.448E-04	5.448E-04
193	.835	.06	5.059E-04	4.779E-04	4.779E-04	4.779E-04	5.444E-04	5.444E-04
194	.840	.06	5.055E-04	4.775E-04	4.775E-04	4.775E-04	5.440E-04	5.440E-04
195	.844	.06	5.051E-04	4.771E-04	4.771E-04	4.771E-04	5.436E-04	5.436E-04
196	.848	.06	5.047E-04	4.767E-04	4.767E-04	4.767E-04	5.432E-04	5.432E-04
197	.852	.06	5.043E-04	4.763E-04	4.763E-04	4.763E-04	5.428E-04	5.428E-04
198	.856	.06	5.039E-04	4.759E-04	4.759E-04	4.759E-04	5.424E-04	5.424E-04
199	.860	.06	5.035E-04	4.755E-04	4.755E-04	4.755E-04	5.420E-04	5.420E-04
200	.864	.06	5.031E-04	4.751E-04	4.751E-04	4.751E-04	5.416E-04	5.416E-04
201	.868	.06	5.027E-04	4.747E-04	4.747E-04	4.747E-04	5.412E-04	5.412E-04
202	.872	.06	5.023E-04	4.743E-04	4.743E-04	4.743E-04	5.408E-04	5.408E-04
203	.876	.06	5.019E-04	4.739E-04	4.739E-04	4.739E-04	5.404E-04	5.404E-04
204	.880	.06	5.015E-04	4.735E-04	4.735E-04	4.735E-04	5.400E-04	5.400E-04
205	.884	.06	5.011E-04	4.731E-04	4.731E-04	4.731E-04	5.396E-04	5.396E-04
206	.888	.06	5.007E-04	4.727E-04	4.727E-04	4.727E-04	5.392E-04	5.392E-04
207	.892	.06	5.003E-04	4.723E-04	4.723E-04	4.723E-04	5.388E-04	5.388E-04
208	.896	.06	5.000E-04	4.719E-04	4.719E-04	4.719E-04	5.384E-04	5.384E-04
209	.900	.06	5.000E-04	4.719E-04	4.719E-04	4.719E-04	5.384E-04	5.384E-04
210	.904	.06	5.000E-04	4.719E-04	4.719E-04	4.719E-04	5.384E-04	5.384E-04

RUN 496 WTH 1333 STANTON NUMBERS C-O-AXIAL THERMOCOUPLE SHAREDONE TEST 1P/10/79-12/12/79

TIME	ALPHA	01 ST	02 ST	03 ST	11 ST	12 ST	13 ST	14 ST	15 ST
211	.906	5.085E-04	4.808E-04	5.535E-04	4.759E-03	3.559E-03	5.115E-04	5.442E-04	5.532E-04
212	.910	5.075E-04	4.807E-04	4.554E-04	4.750E-03	3.551E-03	5.100E-04	5.435E-04	5.524E-04
213	.914	5.062E-04	4.804E-04	4.575E-04	4.744E-03	3.549E-03	5.090E-04	5.424E-04	5.519E-04
214	.918	5.048E-04	4.801E-04	4.596E-04	4.744E-03	3.549E-03	5.080E-04	5.411E-04	5.525E-04
215	.923	5.027E-04	4.799E-04	4.623E-04	4.740E-03	3.544E-03	5.068E-04	5.401E-04	5.535E-04
216	.927	5.004E-04	4.793E-04	4.649E-04	4.737E-03	3.547E-03	5.063E-04	5.437E-04	5.557E-04
217	.931	4.978E-04	4.793E-04	4.679E-04	4.733E-03	3.547E-03	5.063E-04	5.414E-04	5.558E-04
218	.935	4.948E-04	4.790E-04	4.710E-04	4.731E-03	3.542E-03	5.063E-04	5.410E-04	5.575E-04
219	.939	4.914E-04	4.787E-04	4.735E-04	4.726E-03	3.541E-03	5.061E-04	5.415E-04	5.593E-04
220	.943	4.877E-04	4.784E-04	4.779E-04	4.725E-03	3.538E-03	5.061E-04	5.409E-04	5.622E-04
221	.944	4.835E-04	4.782E-04	4.817E-04	4.725E-03	3.538E-03	5.061E-04	5.415E-04	5.671E-04
222	.952	4.790E-04	4.780E-04	4.857E-04	4.725E-03	3.538E-03	5.061E-04	5.401E-04	5.696E-04
223	.956	4.741E-04	4.778E-04	4.901E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	5.742E-04
224	.960	4.687E-04	4.776E-04	4.947E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	5.790E-04
225	.964	4.630E-04	4.776E-04	4.996E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	5.851E-04
226	.968	4.568E-04	4.776E-04	5.044E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	5.911E-04
227	.973	4.503E-04	4.782E-04	5.104E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	5.986E-04
228	.977	4.434E-04	4.786E-04	5.164E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	6.061E-04
229	.981	4.361E-04	4.791E-04	5.227E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	6.158E-04
230	.985	4.284E-04	4.797E-04	5.295E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	6.228E-04
231	.989	4.204E-04	4.805E-04	5.368E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	6.322E-04
232	.993	4.120E-04	4.814E-04	5.446E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	6.422E-04
233	1.002	4.033E-04	4.825E-04	5.529E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	6.525E-04
234	1.006	3.943E-04	4.836E-04	5.619E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	6.630E-04
235	1.010	3.850E-04	4.849E-04	5.714E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	6.747E-04
236	1.014	3.753E-04	4.863E-04	5.817E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	6.867E-04
237	1.018	3.655E-04	4.878E-04	5.927E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	7.024E-04
238	1.022	3.554E-04	4.894E-04	6.046E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	7.142E-04
239	1.026	3.450E-04	4.911E-04	6.173E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	7.277E-04
240	1.027	3.345E-04	4.928E-04	6.309E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	7.438E-04
241	1.031	3.239E-04	4.946E-04	6.456E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	7.595E-04
242	1.035	3.132E-04	4.965E-04	6.613E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	7.761E-04
243	1.039	3.023E-04	4.984E-04	6.781E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	7.915E-04
244	1.043	2.915E-04	5.003E-04	6.962E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	8.097E-04
245	1.047	2.807E-04	5.022E-04	7.155E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	8.280E-04
246	1.051	2.699E-04	5.041E-04	7.362E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	8.466E-04
247	1.054	2.592E-04	5.060E-04	7.583E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	8.659E-04
248	1.060	2.487E-04	5.079E-04	7.819E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	8.899E-04
249	1.064	2.384E-04	5.097E-04	8.070E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	9.119E-04
250	1.068	2.283E-04	5.116E-04	8.337E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	9.380E-04
251	1.072	2.185E-04	5.134E-04	8.621E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	9.683E-04
252	1.076	2.090E-04	5.152E-04	8.921E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.013E-03
253	1.081	1.999E-04	5.169E-04	9.238E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.074E-03
254	1.085	1.912E-04	5.186E-04	9.573E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.043E-03
255	1.089	1.829E-04	5.202E-04	9.925E-04	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.074E-03
256	1.093	1.751E-04	5.218E-04	1.029E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.043E-03
257	1.097	1.677E-04	5.234E-04	1.066E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.074E-03
258	1.101	1.609E-04	5.249E-04	1.109E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.043E-03
259	1.104	1.547E-04	5.263E-04	1.151E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.074E-03
260	1.110	1.490E-04	5.276E-04	1.194E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.243E-03
261	1.114	1.438E-04	5.289E-04	1.239E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.283E-03
262	1.118	1.393E-04	5.301E-04	1.285E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.324E-03
263	1.122	1.353E-04	5.312E-04	1.333E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.368E-03
264	1.126	1.319E-04	5.321E-04	1.382E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.410E-03
265	1.130	1.291E-04	5.330E-04	1.431E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.458E-03
266	1.134	1.268E-04	5.337E-04	1.481E-03	4.725E-03	3.536E-03	5.061E-04	5.401E-04	1.500E-03

RUN 496		WTH 1333		STANTON NUMBERS		C0-AXIAL THERMOCOUPLE SHAKEDOWN TEST		12/10/79-12/12/79	
TIME	ALPHA	G1 ST	G2 ST	G3 ST	I1 ST	I2 ST	I3 ST	T4 ST	I5 ST
267	1.139	1.252E-04	5.343E-04	1.532E-03	1.056E-02	1.743E-03	1.780E-04	1.199E-04	1.546E-03
268	1.143	1.241E-04	5.347E-04	1.563E-03	1.062E-02	1.753E-03	1.739E-04	1.196E-04	1.543E-03
269	1.147	1.235E-04	5.350E-04	1.634E-03	1.063E-02	1.711E-03	1.680E-04	1.185E-04	1.637E-03
270	1.151	1.234E-04	5.351E-04	1.645E-03	1.063E-02	1.675E-03	1.637E-04	1.187E-04	1.641E-03
271	1.155	1.230E-04	5.351E-04	1.735E-03	1.074E-02	1.640E-03	1.599E-04	1.144E-04	1.727E-03
272	1.159	1.247E-04	5.350E-04	1.745E-03	1.073E-02	1.606E-03	1.563E-04	1.143E-04	1.773E-03
273	1.164	1.260E-04	5.347E-04	1.834E-03	1.083E-02	1.575E-03	1.531E-04	1.140E-04	1.820E-03
274	1.167	1.277E-04	5.343E-04	1.882E-03	1.085E-02	1.533E-03	1.501E-04	1.142E-04	1.863E-03
275	1.172	1.297E-04	5.339E-04	1.929E-03	1.090E-02	1.505E-03	1.463E-04	1.145E-04	1.909E-03
276	1.176	1.321E-04	5.335E-04	1.974E-03	1.095E-02	1.481E-03	1.472E-04	1.147E-04	1.956E-03
277	1.180	1.346E-04	5.326E-04	2.017E-03	1.098E-02	1.461E-03	1.443E-04	1.149E-04	1.999E-03
278	1.184	1.377E-04	5.320E-04	2.059E-03	1.099E-02	1.415E-03	1.436E-04	1.152E-04	2.045E-03
279	1.189	1.408E-04	5.313E-04	2.099E-03	1.103E-02	1.389E-03	1.423E-04	1.157E-04	2.091E-03
280	1.193	1.441E-04	5.306E-04	2.138E-03	1.105E-02	1.364E-03	1.406E-04	1.160E-04	2.136E-03
281	1.197	1.476E-04	5.299E-04	2.174E-03	1.106E-02	1.340E-03	1.402E-04	1.165E-04	2.181E-03
282	1.201	1.511E-04	5.292E-04	2.208E-03	1.108E-02	1.319E-03	1.401E-04	1.171E-04	2.226E-03
283	1.205	1.547E-04	5.286E-04	2.240E-03	1.111E-02	1.301E-03	1.395E-04	1.176E-04	2.273E-03
284	1.209	1.584E-04	5.281E-04	2.270E-03	1.113E-02	1.280E-03	1.391E-04	1.187E-04	2.318E-03
285	1.214	1.620E-04	5.276E-04	2.297E-03	1.114E-02	1.259E-03	1.392E-04	1.182E-04	2.361E-03
286	1.218	1.656E-04	5.272E-04	2.322E-03	1.116E-02	1.244E-03	1.388E-04	1.179E-04	2.401E-03
287	1.222	1.691E-04	5.268E-04	2.345E-03	1.118E-02	1.231E-03	1.387E-04	1.176E-04	2.441E-03
288	1.226	1.725E-04	5.265E-04	2.365E-03	1.119E-02	1.218E-03	1.395E-04	1.176E-04	2.477E-03
289	1.230	1.758E-04	5.262E-04	2.382E-03	1.120E-02	1.204E-03	1.395E-04	1.176E-04	2.510E-03
290	1.234	1.794E-04	5.259E-04	2.397E-03	1.121E-02	1.196E-03	1.386E-04	1.171E-04	2.539E-03
291	1.239	1.828E-04	5.256E-04	2.409E-03	1.122E-02	1.188E-03	1.390E-04	1.163E-04	2.563E-03
292	1.243	1.864E-04	5.253E-04	2.419E-03	1.123E-02	1.177E-03	1.397E-04	1.166E-04	2.595E-03
293	1.247	1.899E-04	5.250E-04	2.425E-03	1.124E-02	1.168E-03	1.397E-04	1.173E-04	2.602E-03
294	1.251	1.930E-04	5.247E-04	2.430E-03	1.124E-02	1.171E-03	1.400E-04	1.186E-04	2.618E-03
295	1.255	1.960E-04	5.243E-04	2.431E-03	1.120E-02	1.158E-03	1.389E-04	1.184E-04	2.624E-03
296	1.259	1.995E-04	5.239E-04	2.430E-03	1.120E-02	1.157E-03	1.409E-04	1.175E-04	2.631E-03
297	1.263	1.938E-04	5.233E-04	2.427E-03	1.118E-02	1.153E-03	1.419E-04	1.179E-04	2.631E-03

MIN 497 WTR 1333 CU-AXIAL THERMOCOUPLE SHAKEDOWN TEST 12/10/79-12/12/79

TIME	ALPHA	P0	T0	T01	MACH	PINF	TINF	UINF	RHOINF	MEINF
740	10.14	19247.4	2630.5	3164.5	14.25	.0453	87.1	6631.2	1.354E-03	3.942E+06
744	10.15	19307.3	2636.9	3172.5	14.24	.0454	87.4	6638.4	1.355E-03	3.936E+06
749	10.14	19321.4	2643.1	3180.3	14.23	.0457	87.7	6645.4	1.357E-03	3.931E+06
753	10.12	19335.3	2649.1	3187.8	14.22	.0459	88.0	6652.1	1.358E-03	3.926E+06
757	10.11	19346.3	2654.6	3195.0	14.21	.0461	88.3	6658.6	1.360E-03	3.922E+06
761	10.10	19354.3	2660.4	3201.9	14.20	.0463	88.7	6664.7	1.362E-03	3.918E+06
765	10.09	19354.3	2665.9	3208.7	14.18	.0466	89.0	6670.4	1.364E-03	3.914E+06
769	10.08	19361.5	2671.4	3215.4	14.17	.0468	89.3	6676.7	1.367E-03	3.911E+06
774	10.07	19361.4	2676.7	3222.0	14.15	.0471	89.6	6682.5	1.370E-03	3.909E+06
778	10.06	19354.6	2682.2	3228.6	14.14	.0474	90.0	6688.3	1.373E-03	3.906E+06
782	10.05	19356.8	2687.7	3235.3	14.12	.0477	90.4	6694.2	1.377E-03	3.904E+06
786	10.04	19353.9	2693.4	3242.2	14.11	.0481	90.8	6700.3	1.381E-03	3.902E+06
790	10.03	19351.5	2699.2	3249.4	14.09	.0484	91.2	6706.5	1.385E-03	3.901E+06
794	10.02	19350.6	2705.3	3256.8	14.07	.0488	91.6	6713.0	1.389E-03	3.900E+06
798	10.01	19351.7	2711.5	3264.4	14.05	.0492	92.0	6719.4	1.394E-03	3.899E+06
803	10.00	19355.2	2717.9	3272.3	14.03	.0496	92.4	6726.5	1.399E-03	3.898E+06
807	9.99	19361.5	2724.5	3280.4	14.01	.0500	92.9	6733.6	1.403E-03	3.897E+06
811	9.98	19370.6	2731.1	3288.7	13.99	.0504	93.3	6740.9	1.408E-03	3.896E+06
815	9.97	19382.4	2737.8	3297.1	13.98	.0508	93.8	6748.2	1.413E-03	3.895E+06
819	9.96	19390.5	2744.4	3305.4	13.96	.0512	94.2	6755.5	1.417E-03	3.894E+06
823	9.95	19412.4	2751.0	3313.7	13.95	.0515	94.6	6762.7	1.421E-03	3.892E+06
828	9.94	19429.4	2757.3	3321.7	13.93	.0519	95.0	6769.7	1.424E-03	3.891E+06
832	9.93	19446.8	2763.5	3329.5	13.92	.0522	95.3	6776.5	1.427E-03	3.889E+06
836	9.93	19463.6	2769.3	3336.8	13.91	.0525	95.7	6783.0	1.430E-03	3.888E+06
840	9.92	19474.1	2774.7	3343.7	13.90	.0527	96.0	6789.4	1.432E-03	3.888E+06
844	9.91	19492.5	2779.7	3350.1	13.89	.0529	96.2	6794.6	1.434E-03	3.888E+06
848	9.90	19503.1	2784.3	3355.8	13.88	.0531	96.5	6799.6	1.435E-03	3.876E+06
852	9.90	19510.4	2788.4	3361.0	13.88	.0533	96.7	6804.1	1.436E-03	3.872E+06
856	9.89	19514.0	2792.0	3365.5	13.87	.0534	96.9	6808.1	1.436E-03	3.868E+06
861	9.88	19513.8	2795.2	3369.5	13.87	.0535	97.1	6811.6	1.436E-03	3.863E+06
865	9.88	19509.7	2798.0	3372.9	13.86	.0535	97.2	6814.5	1.436E-03	3.859E+06
869	9.87	19502.2	2800.5	3375.9	13.86	.0536	97.3	6817.1	1.435E-03	3.854E+06
873	9.87	19491.7	2802.7	3378.4	13.85	.0536	97.4	6819.3	1.434E-03	3.849E+06
877	9.86	19478.9	2804.6	3380.7	13.85	.0536	97.5	6821.3	1.434E-03	3.844E+06
882	9.86	19464.6	2806.4	3382.7	13.85	.0537	97.6	6823.0	1.433E-03	3.839E+06
886	9.86	19449.9	2808.1	3384.6	13.84	.0537	97.7	6824.7	1.432E-03	3.834E+06
891	9.85	19435.7	2809.7	3386.4	13.84	.0537	97.8	6826.3	1.432E-03	3.830E+06
894	9.85	19423.2	2811.4	3388.4	13.84	.0538	97.9	6828.0	1.431E-03	3.825E+06
898	9.85	19413.4	2813.2	3390.4	13.83	.0538	98.0	6829.7	1.431E-03	3.821E+06
902	9.85	19407.3	2815.1	3392.7	13.83	.0538	98.1	6831.7	1.430E-03	3.818E+06
907	9.85	19405.7	2817.1	3395.2	13.83	.0539	98.3	6833.9	1.430E-03	3.815E+06
911	9.84	19409.3	2819.3	3398.0	13.82	.0540	98.4	6836.3	1.430E-03	3.812E+06
915	9.84	19418.6	2821.7	3401.1	13.82	.0540	98.5	6839.0	1.430E-03	3.810E+06
919	9.84	19433.7	2824.3	3404.4	13.82	.0541	98.6	6842.0	1.431E-03	3.808E+06
923	9.84	19454.6	2827.0	3408.0	13.82	.0542	98.7	6845.1	1.431E-03	3.806E+06
927	9.84	19481.0	2829.6	3411.9	13.82	.0542	98.8	6848.5	1.431E-03	3.805E+06
931	9.84	19512.3	2832.7	3415.9	13.82	.0543	98.9	6852.1	1.432E-03	3.804E+06
936	9.84	19547.6	2835.7	3420.0	13.82	.0544	99.0	6855.8	1.432E-03	3.804E+06
940	9.84	19585.9	2838.7	3424.3	13.82	.0544	99.1	6859.5	1.432E-03	3.803E+06
944	9.84	19626.1	2841.6	3428.5	13.82	.0544	99.1	6863.3	1.432E-03	3.802E+06
948	9.84	19666.7	2844.6	3432.6	13.83	.0545	99.2	6867.0	1.432E-03	3.802E+06
952	9.85	19706.5	2847.4	3436.7	13.83	.0545	99.3	6870.6	1.432E-03	3.801E+06
956	9.85	19744.1	2850.1	3440.6	13.83	.0545	99.3	6874.0	1.431E-03	3.799E+06
961	9.85	19778.2	2852.7	3444.2	13.84	.0545	99.4	6877.3	1.431E-03	3.798E+06
965	9.85	19807.9	2855.2	3447.6	13.84	.0545	99.4	6880.3	1.430E-03	3.796E+06
969	9.85	19832.2	2857.4	3450.8	13.84	.0545	99.5	6883.1	1.429E-03	3.793E+06
AVERAGE		19460.3	2766.9	3334.1	13.95	.0516	95.1	6780.5	1.413E-03	3.861E+06

RUN	497	WTR 133J	CO-AXIAL THERMOCOUPLE SHAKEDOWN TEST	12/10/79-12/12/79	T3	T4	T4	T4	T5	T5	T5
TIME	ALPHA	61	62	63	QDOT	T1	T2	T2	T3	T4	T5
540	10.16	1.360	3.635	7.292	157.96	65.991	93.26	16.529	73.94	77.05	82.23
541	10.15	1.357	3.620	7.249	156.95	64.085	93.40	16.531	73.94	77.05	82.33
542	10.14	1.354	3.607	7.211	155.94	62.336	93.61	16.537	73.97	77.15	82.44
543	10.12	1.352	3.597	7.179	161.94	69.704	94.00	16.547	73.99	77.17	82.55
544	10.11	1.351	3.590	7.152	161.50	70.057	94.00	16.556	74.02	77.21	82.69
545	10.10	1.351	3.585	7.131	162.35	70.327	94.18	16.571	74.01	77.27	82.76
546	10.09	1.351	3.584	7.116	163.34	70.452	94.42	16.574	74.03	77.33	82.86
547	10.08	1.353	3.586	7.108	163.47	70.409	94.64	16.603	74.06	77.40	82.97
548	10.07	1.356	3.590	7.106	165.46	71.707	94.85	16.640	74.09	77.47	83.11
549	10.06	1.359	3.594	7.111	166.45	71.627	95.10	16.641	74.11	77.51	83.18
550	10.05	1.363	3.604	7.123	167.59	72.177	95.27	16.716	74.13	77.57	83.29
551	10.04	1.368	3.623	7.140	168.72	72.486	95.45	16.739	74.17	77.65	83.43
552	10.03	1.374	3.634	7.164	169.57	73.070	95.63	16.801	74.20	77.73	83.54
553	10.02	1.380	3.658	7.194	170.70	73.697	95.84	16.851	74.20	77.77	83.68
554	10.01	1.387	3.679	7.229	171.69	74.351	96.09	16.919	74.21	77.84	83.75
555	10.00	1.394	3.702	7.269	172.42	75.008	96.30	16.996	74.25	77.90	83.86
556	9.99	1.402	3.727	7.314	173.96	75.545	96.51	17.036	74.28	77.97	83.96
557	9.98	1.409	3.754	7.363	175.09	76.234	96.69	17.107	74.28	78.07	84.07
558	9.97	1.417	3.782	7.416	176.22	76.968	96.94	17.203	74.30	78.07	84.17
559	9.96	1.425	3.810	7.472	177.35	77.505	97.16	17.275	74.33	78.15	84.28
560	9.95	1.433	3.840	7.530	178.63	78.153	97.36	17.390	74.35	78.22	84.42
561	9.94	1.441	3.869	7.590	179.62	78.601	97.57	17.464	74.38	78.25	84.53
562	9.93	1.449	3.899	7.652	181.17	79.190	97.84	17.567	74.38	78.34	84.63
563	9.92	1.457	3.929	7.714	182.45	79.803	98.07	17.672	74.41	78.45	84.74
564	9.91	1.464	3.958	7.777	183.72	80.127	98.28	17.730	74.44	78.50	84.88
565	9.90	1.471	3.986	7.840	184.85	80.548	98.53	17.830	74.45	78.56	84.99
566	9.89	1.477	4.014	7.901	186.13	80.733	98.78	17.878	74.46	78.63	85.16
567	9.88	1.483	4.040	7.962	187.12	81.041	99.02	17.943	74.51	78.70	85.34
568	9.87	1.489	4.065	8.021	188.11	81.326	99.27	18.022	74.53	78.74	85.52
569	9.86	1.494	4.089	8.078	189.10	81.368	99.48	18.056	74.53	78.82	85.62
570	9.85	1.498	4.111	8.132	190.23	81.385	99.73	18.085	74.55	78.84	85.77
571	9.84	1.502	4.131	8.184	191.22	81.390	99.94	18.116	74.57	78.94	85.91
572	9.83	1.505	4.150	8.233	192.21	81.381	100.12	18.139	74.62	78.97	86.05
573	9.82	1.508	4.167	8.278	193.06	81.493	100.33	18.176	74.62	79.07	86.16
574	9.81	1.510	4.182	8.320	194.05	81.712	100.55	18.154	74.63	79.07	86.30
575	9.80	1.511	4.195	8.359	195.04	81.708	100.72	18.176	74.64	79.14	86.40
576	9.79	1.512	4.206	8.394	195.89	81.297	100.93	18.176	74.69	79.21	86.54
577	9.78	1.513	4.215	8.425	196.74	81.317	101.11	18.175	74.70	79.24	86.62
578	9.77	1.513	4.222	8.453	197.59	81.446	101.32	18.202	74.70	79.25	86.72
579	9.76	1.513	4.224	8.477	198.44	81.267	101.50	18.179	74.74	79.34	86.83
580	9.75	1.513	4.232	8.497	199.43	81.436	101.68	18.233	74.76	79.41	86.97
581	9.74	1.512	4.234	8.514	200.42	81.369	101.85	18.210	74.76	79.44	87.08
582	9.73	1.509	4.235	8.539	201.42	81.610	102.10	18.243	74.77	79.51	87.18
583	9.72	1.508	4.235	8.568	202.42	81.745	102.28	18.267	74.81	79.59	87.32
584	9.71	1.508	4.233	8.548	203.82	81.761	102.46	18.247	74.82	79.64	87.43
585	9.70	1.506	4.231	8.553	204.82	81.967	102.63	18.247	74.84	79.64	87.54
586	9.69	1.505	4.227	8.557	205.82	82.104	102.85	18.290	74.84	79.74	87.64
587	9.68	1.503	4.223	8.554	206.52	82.224	103.06	18.281	74.88	79.74	87.74
588	9.67	1.502	4.217	8.554	207.51	82.415	103.23	18.310	74.89	79.84	87.89
589	9.66	1.500	4.212	8.556	207.50	82.401	103.41	18.297	74.90	79.84	88.00
590	9.65	1.499	4.206	8.553	208.49	82.495	103.59	18.280	74.92	79.94	88.21
591	9.64	1.497	4.199	8.549	209.34	82.779	103.77	18.240	74.92	79.94	88.31
592	9.63	1.497	4.193	8.544	210.19	82.718	103.94	18.248	74.98	80.07	88.46
593	9.62	1.494	4.186	8.539	211.04	82.485	104.08	18.281	74.98	80.07	88.54
594	9.61	1.495	4.180	8.534	212.03	82.679	104.26	18.235	74.98	80.12	88.67
595	9.60	1.494	4.173	8.529	212.74	83.012	104.44	18.230	75.01	80.17	88.81

RUN 497 WTR 13J3 CO-AXIAL THERMOCOUPLE SHAKEDOWN TEST 12/10/79-12/12/79

TIME	ALPHA	PO	TU	FOI	WACH	MINP	TIME	TIME	HEINF	HEINF
.773	9.85	19450.6	28594.5	3453.6	13.44	.0545	99.5	6885.7	1.426E-03	3.741E+06
.777	9.86	19462.6	2861.4	3456.1	13.44	.0545	99.6	6887.9	1.427E-03	3.747E+06
.781	9.86	19468.3	2861.2	3456.4	13.45	.0545	99.6	6889.9	1.426E-03	3.748E+06
.785	9.86	19468.8	2864.8	3460.4	13.45	.0545	99.7	6891.0	1.425E-03	3.740E+06
.790	9.86	19462.1	2866.2	3462.1	13.44	.0545	99.7	6893.2	1.424E-03	3.775E+06
.794	9.86	19451.6	2867.5	3463.0	13.44	.0545	99.8	6894.5	1.423E-03	3.771E+06
.798	9.87	19437.3	2866.7	3464.9	13.44	.0545	99.8	6895.6	1.422E-03	3.767E+06
.802	9.87	19420.3	2869.8	3466.1	13.44	.0545	99.9	6896.6	1.421E-03	3.763E+06
.806	9.87	19402.0	2870.9	3467.1	13.43	.0545	100.0	6897.4	1.421E-03	3.759E+06
.810	9.87	19783.4	2871.9	3468.1	13.43	.0545	100.1	6898.2	1.420E-03	3.756E+06
.814	9.87	19765.0	2872.8	3469.1	13.43	.0546	100.2	6899.0	1.420E-03	3.753E+06
.818	9.88	19749.7	2873.7	3470.0	13.42	.0546	100.2	6899.8	1.420E-03	3.751E+06
.822	9.88	19736.5	2874.7	3471.0	13.42	.0547	100.3	6900.0	1.421E-03	3.749E+06
.826	9.88	19726.5	2875.7	3472.1	13.41	.0548	100.4	6901.5	1.421E-03	3.748E+06
.830	9.88	19720.2	2876.7	3473.3	13.41	.0548	100.5	6902.6	1.422E-03	3.747E+06
.834	9.89	19717.7	2877.8	3474.7	13.40	.0549	100.6	6903.7	1.423E-03	3.747E+06
.838	9.89	19714.0	2879.0	3476.3	13.40	.0550	100.7	6905.0	1.424E-03	3.748E+06
.842	9.89	19723.8	2880.4	3476.0	13.40	.0551	100.8	6906.5	1.425E-03	3.748E+06
.846	9.89	19731.6	2881.9	3480.0	13.39	.0552	100.9	6908.2	1.427E-03	3.749E+06
.850	9.90	19741.9	2883.6	3482.2	13.39	.0553	101.0	6910.1	1.428E-03	3.749E+06
.854	9.90	19754.1	2885.4	3484.6	13.39	.0554	101.1	6912.2	1.429E-03	3.749E+06
.858	9.90	19767.5	2887.4	3487.5	13.39	.0555	101.2	6914.5	1.430E-03	3.748E+06
.862	9.91	19781.3	2889.6	3490.2	13.38	.0556	101.3	6917.0	1.430E-03	3.748E+06
.866	9.91	19795.1	2891.9	3493.4	13.38	.0556	101.4	6919.4	1.430E-03	3.748E+06
.870	9.91	19808.3	2894.4	3496.6	13.38	.0557	101.5	6922.6	1.430E-03	3.744E+06
.874	9.92	19820.4	2897.0	3500.1	13.38	.0557	101.6	6925.6	1.430E-03	3.744E+06
.878	9.92	19831.2	2899.8	3503.6	13.38	.0558	101.7	6928.7	1.430E-03	3.737E+06
.882	9.92	19840.5	2902.5	3507.2	13.38	.0558	101.8	6931.4	1.429E-03	3.738E+06
.886	9.93	19848.2	2905.3	3510.8	13.38	.0558	101.9	6935.0	1.428E-03	3.729E+06
.890	9.93	19854.4	2904.1	3514.4	13.37	.0559	102.0	6938.0	1.427E-03	3.724E+06
.894	9.94	19859.4	2910.8	3517.8	13.37	.0559	102.1	6941.0	1.426E-03	3.719E+06
.898	9.94	19863.3	2913.3	3521.1	13.37	.0559	102.2	6943.4	1.425E-03	3.714E+06
.902	9.94	19866.4	2915.7	3524.1	13.37	.0559	102.3	6946.5	1.424E-03	3.709E+06
.906	9.94	19869.0	2917.9	3526.9	13.37	.0559	102.4	6948.9	1.424E-03	3.705E+06
.910	9.95	19871.6	2919.8	3529.3	13.37	.0559	102.5	6951.0	1.421E-03	3.701E+06
.914	9.95	19874.2	2921.5	3531.4	13.37	.0559	102.5	6952.9	1.421E-03	3.698E+06
.918	9.95	19877.3	2922.9	3533.2	13.37	.0559	102.6	6954.4	1.420E-03	3.695E+06
.922	9.96	19880.9	2924.0	3534.6	13.37	.0559	102.6	6956.6	1.419E-03	3.692E+06
.926	9.96	19885.1	2925.3	3536.4	13.37	.0559	102.7	6957.2	1.419E-03	3.692E+06
.930	9.96	19890.0	2925.6	3536.9	13.37	.0559	102.7	6957.7	1.420E-03	3.694E+06
.934	9.97	19901.3	2925.7	3537.0	13.37	.0559	102.7	6957.7	1.420E-03	3.694E+06
.938	9.97	19907.5	2925.5	3537.0	13.37	.0559	102.7	6957.7	1.420E-03	3.694E+06
.942	9.97	19913.6	2925.3	3536.7	13.37	.0560	102.7	6957.5	1.421E-03	3.696E+06
.946	9.98	19919.4	2924.9	3536.4	13.37	.0560	102.6	6957.2	1.422E-03	3.698E+06
.950	9.98	19924.6	2924.5	3535.9	13.37	.0560	102.6	6956.4	1.423E-03	3.700E+06
.954	9.98	19929.0	2924.1	3535.5	13.37	.0560	102.6	6956.4	1.423E-03	3.702E+06
.958	9.99	19932.2	2923.8	3535.1	13.37	.0560	102.6	6956.1	1.423E-03	3.704E+06
.962	9.99	19934.0	2923.5	3534.8	13.37	.0560	102.6	6955.8	1.424E-03	3.705E+06
.966	9.99	19934.2	2923.4	3534.6	13.37	.0560	102.6	6955.6	1.424E-03	3.705E+06
.970	9.99	19932.6	2923.4	3534.6	13.37	.0560	102.6	6955.6	1.424E-03	3.705E+06
.974	9.99	19929.8	2923.6	3534.8	13.37	.0561	102.6	6955.6	1.424E-03	3.705E+06
.978	10.00	19925.1	2924.0	3535.3	13.37	.0561	102.6	6956.2	1.424E-03	3.705E+06
.982	10.00	19919.0	2924.6	3536.0	13.37	.0561	102.7	6956.6	1.423E-03	3.702E+06
.986	10.00	19911.5	2925.5	3536.9	13.37	.0561	102.7	6957.6	1.423E-03	3.699E+06
.990	10.00	19903.0	2926.5	3538.1	13.37	.0561	102.8	6958.6	1.422E-03	3.696E+06
AVERAGE		19844.4	2899.9	3504.0	13.39	.0555	101.5	6929.1	1.424E-03	3.729E+06

RUN 497 WTR 1333 CO-AXIAL THERMOCOUPLE SHARFMAN TEST 12/10/79-12/12/79

TIME	ALPHA	G1 QDOT	G2 QDOT	G3 QDOT	T1 TW	T1 QDOT	T2 TW	T2 QDOT	T3 TW	T3 QDOT	T4 TW	T4 QDOT	T5 TW	T5 QDOT
.773	9.85	1.494	4.167	8.524	213.44	83.094	104.56	144.10	75.04	1.708	80.22	4.773	88.77	10.078
.777	9.86	1.495	4.162	8.520	214.29	83.127	104.76	142.12	75.03	1.710	80.20	4.776	88.88	10.082
.781	9.86	1.495	4.156	8.516	215.28	83.204	104.90	142.37	75.03	1.711	80.20	4.779	88.95	10.084
.785	9.86	1.495	4.151	8.514	215.99	82.956	105.07	141.49	75.07	1.710	80.34	4.789	89.09	10.069
.790	9.86	1.496	4.147	8.512	216.84	83.015	105.22	141.99	75.10	1.711	80.34	4.803	89.20	10.078
.794	9.86	1.497	4.143	8.512	217.69	83.068	105.39	142.08	75.10	1.709	80.34	4.816	89.27	10.076
.798	9.87	1.499	4.139	8.513	218.40	83.085	105.57	142.34	75.11	1.714	80.34	4.827	89.34	10.082
.802	9.87	1.500	4.137	8.515	219.25	83.052	105.71	142.45	75.14	1.714	80.34	4.835	89.55	10.085
.806	9.87	1.502	4.135	8.518	220.09	82.949	105.89	142.12	75.17	1.717	80.60	4.834	89.62	10.066
.810	9.87	1.504	4.133	8.523	220.80	83.040	106.07	142.30	75.17	1.718	80.60	4.841	89.69	10.075
.814	9.87	1.506	4.132	8.529	221.51	83.150	106.21	142.61	75.18	1.723	80.60	4.848	89.73	10.106
.819	9.88	1.508	4.132	8.536	222.08	83.015	106.38	142.40	75.20	1.725	80.74	4.848	89.84	10.097
.823	9.88	1.510	4.132	8.545	222.93	83.109	106.53	142.73	75.22	1.728	80.80	4.850	89.91	10.105
.827	9.88	1.512	4.133	8.555	223.77	82.949	106.70	142.37	75.22	1.726	80.84	4.849	90.05	10.101
.831	9.88	1.515	4.134	8.566	224.34	83.062	106.88	142.40	75.25	1.727	80.84	4.848	90.15	10.134
.835	9.89	1.517	4.136	8.578	225.33	83.256	107.02	142.72	75.27	1.733	80.92	4.851	90.26	10.154
.840	9.89	1.520	4.134	8.591	226.04	83.115	107.16	142.44	75.30	1.734	80.97	4.832	90.37	10.141
.844	9.89	1.522	4.141	8.605	226.75	83.079	107.30	142.26	75.29	1.735	80.94	4.821	90.44	10.151
.848	9.89	1.524	4.144	8.619	227.50	83.200	107.44	142.29	75.30	1.735	81.02	4.822	90.54	10.183
.852	9.90	1.526	4.144	8.634	228.16	83.291	107.62	142.30	75.33	1.736	81.08	4.812	90.65	10.211
.856	9.90	1.529	4.151	8.650	229.01	83.461	107.80	142.64	75.36	1.742	81.12	4.811	90.75	10.244
.860	9.90	1.531	4.156	8.665	229.72	83.300	107.95	142.18	75.35	1.744	81.12	4.811	90.86	10.245
.864	9.91	1.532	4.160	8.681	230.57	83.426	108.05	142.28	75.37	1.739	81.14	4.794	90.93	10.264
.868	9.91	1.534	4.164	8.697	231.28	83.680	108.22	142.34	75.40	1.740	81.22	4.793	91.04	10.275
.872	9.91	1.536	4.169	8.713	231.94	83.524	108.33	142.36	75.42	1.742	81.22	4.791	91.14	10.284
.876	9.92	1.537	4.174	8.729	232.69	83.592	108.51	142.72	75.42	1.747	81.31	4.802	91.21	10.304
.880	9.92	1.538	4.177	8.744	233.40	83.479	108.65	142.42	75.42	1.744	81.35	4.793	91.36	10.284
.884	9.93	1.540	4.184	8.759	234.11	83.524	108.82	142.76	75.46	1.744	81.38	4.801	91.43	10.294
.888	9.93	1.541	4.189	8.774	234.84	83.761	108.97	142.86	75.47	1.743	81.42	4.811	91.53	10.310
.892	9.93	1.541	4.194	8.787	235.56	83.759	109.11	143.02	75.47	1.740	81.42	4.818	91.64	10.320
.896	9.93	1.542	4.199	8.800	236.23	83.901	109.25	143.17	75.48	1.748	81.52	4.819	91.71	10.341
.900	9.94	1.542	4.203	8.812	237.08	83.794	109.43	142.49	75.51	1.745	81.52	4.815	91.82	10.341
.904	9.94	1.542	4.204	8.824	237.79	83.941	109.53	142.31	75.54	1.752	81.52	4.840	91.96	10.355
.908	9.94	1.542	4.212	8.834	238.35	84.122	109.71	142.75	75.54	1.754	81.62	4.858	92.03	10.334
.912	9.95	1.544	4.217	8.843	239.06	84.040	109.85	143.35	75.54	1.749	81.62	4.853	92.13	10.326
.916	9.95	1.544	4.221	8.852	240.05	84.163	110.06	143.27	75.56	1.750	81.72	4.854	92.24	10.334
.920	9.95	1.544	4.224	8.865	240.76	84.176	110.17	143.51	75.59	1.750	81.72	4.862	92.31	10.351
.924	9.96	1.540	4.224	8.875	241.18	84.204	110.28	143.56	75.59	1.750	81.72	4.871	92.42	10.374
.928	9.96	1.540	4.231	8.871	242.17	84.406	110.42	143.42	75.60	1.761	81.81	4.859	92.52	10.373
.932	9.96	1.539	4.234	8.875	242.74	84.202	110.59	143.24	75.64	1.760	81.90	4.876	92.63	10.373
.936	9.96	1.539	4.236	8.879	243.31	84.246	110.77	143.41	75.66	1.761	81.94	4.881	92.74	10.374
.940	9.97	1.537	4.234	8.881	244.10	84.302	110.88	143.45	75.65	1.761	81.94	4.861	92.84	10.374
.944	9.97	1.536	4.240	8.883	244.86	84.309	110.96	143.31	75.65	1.761	82.01	4.868	92.94	10.374
.948	9.97	1.535	4.242	8.884	245.57	84.363	111.12	143.34	75.69	1.761	82.01	4.868	93.04	10.374
.952	9.97	1.535	4.243	8.884	246.28	84.444	111.31	143.69	75.72	1.762	82.12	4.866	93.14	10.374
.956	9.98	1.534	4.244	8.884	246.99	84.480	111.41	143.73	75.71	1.762	82.12	4.862	93.24	10.374
.960	9.98	1.531	4.244	8.883	247.75	84.521	111.55	143.64	75.71	1.762	82.12	4.862	93.34	10.374
.964	9.98	1.530	4.245	8.887	248.42	84.514	111.69	143.64	75.71	1.765	82.21	4.864	93.44	10.374
.968	9.99	1.529	4.247	8.880	249.03	84.563	111.83	143.64	75.71	1.765	82.21	4.863	93.54	10.374
.972	9.99	1.528	4.246	8.878	249.59	83.731	111.94	143.64	75.76	1.756	82.31	4.863	93.64	10.374
.976	9.99	1.527	4.244	8.875	250.25	83.795	112.04	143.64	75.77	1.760	82.31	4.865	93.74	10.374
.980	9.99	1.527	4.243	8.872	250.95	83.736	112.19	143.64	75.80	1.761	82.31	4.865	93.84	10.374
.984	10.00	1.526	4.241	8.870	251.66	83.736	112.33	143.64	75.82	1.763	82.41	4.860	93.94	10.374
.988	10.00	1.525	4.240	8.865	252.36	83.736	112.44	143.64	75.82	1.761	82.41	4.864	94.04	10.374
.992	10.00	1.524	4.234	8.865	253.07	83.736	112.54	143.64	75.82	1.761	82.41	4.864	94.14	10.374
.996	10.00	1.524	4.234	8.865	253.77	83.736	112.64	143.64	75.87	1.761	82.51	4.865	94.24	10.374
1.000	10.00	1.524	4.234	8.865	254.47	83.736	112.64	143.64	75.87	1.761	82.51	4.865	94.34	10.374

WIN 497 ATN 1333 CU-AXIAL THERMOCOUPLE SHARFHOOD TEST 12/10/79-12/12/79

TIME	ALPHA	PO	TO	TOL	KALM	PLMR	TIME	TIME	TIME	REINF
1.006	10.01	19841.7	2927.7	3534.5	13.76	.0501	102.4	6949.4	1.421E-03	3.642E+06
1.010	10.01	19883.9	2924.1	3541.1	13.76	.0501	102.9	6949.4	1.420E-03	3.644E+06
1.014	10.01	19874.0	2930.6	3542.9	13.76	.0501	103.0	6962.7	1.419E-03	3.644E+06
1.018	10.01	19864.3	2932.2	3544.8	13.76	.0501	103.1	6964.4	1.418E-03	3.679E+06
1.022	10.02	19855.1	2933.9	3546.6	13.76	.0501	103.1	6966.1	1.417E-03	3.675E+06
1.027	10.02	19846.5	2935.6	3548.9	13.75	.0501	103.2	6967.8	1.416E-03	3.670E+06
1.031	10.02	19838.6	2937.3	3550.9	13.75	.0501	103.3	6969.6	1.416E-03	3.666E+06
1.035	10.02	19832.2	2939.0	3552.9	13.75	.0501	103.4	6971.3	1.415E-03	3.662E+06
1.039	10.03	19826.6	2940.5	3554.8	13.75	.0501	103.5	6972.9	1.414E-03	3.659E+06
1.043	10.03	19822.2	2942.0	3556.6	13.75	.0501	103.5	6974.4	1.413E-03	3.655E+06
1.047	10.03	19818.7	2943.3	3558.2	13.75	.0501	103.6	6975.4	1.413E-03	3.652E+06
1.051	10.04	19816.2	2944.4	3559.6	13.75	.0501	103.6	6977.0	1.412E-03	3.648E+06
1.056	10.04	19814.4	2945.4	3560.8	13.74	.0502	103.7	6978.0	1.412E-03	3.644E+06
1.060	10.04	19813.2	2946.2	3561.8	13.74	.0502	103.7	6978.9	1.412E-03	3.647E+06
1.064	10.05	19812.2	2946.9	3562.7	13.74	.0502	103.8	6979.6	1.412E-03	3.646E+06
1.068	10.05	19811.4	2947.5	3563.4	13.74	.0502	103.8	6980.2	1.412E-03	3.644E+06
1.072	10.05	19810.3	2947.9	3563.9	13.74	.0502	103.8	6980.7	1.412E-03	3.644E+06
1.076	10.05	19808.9	2948.3	3564.4	13.74	.0502	103.8	6981.1	1.412E-03	3.643E+06
1.081	10.05	19808.9	2948.6	3564.8	13.74	.0502	103.9	6981.4	1.412E-03	3.643E+06
1.085	10.06	19804.1	2949.0	3565.2	13.74	.0502	103.9	6981.6	1.412E-03	3.642E+06
1.089	10.06	19800.5	2949.4	3565.6	13.74	.0503	103.9	6982.1	1.412E-03	3.641E+06
1.093	10.06	19796.0	2949.4	3566.4	13.74	.0503	103.9	6982.6	1.412E-03	3.640E+06
1.097	10.06	19790.5	2950.4	3566.8	13.73	.0503	104.0	6983.1	1.411E-03	3.639E+06
1.101	10.06	19786.0	2951.1	3567.6	13.73	.0503	104.0	6983.4	1.411E-03	3.637E+06
1.105	10.06	19776.7	2952.0	3568.6	13.73	.0503	104.1	6984.7	1.410E-03	3.634E+06
1.110	10.06	19768.5	2953.0	3569.4	13.73	.0503	104.1	6985.1	1.410E-03	3.631E+06
1.114	10.06	19754.7	2954.2	3571.2	13.73	.0503	104.2	6986.4	1.409E-03	3.628E+06
1.118	10.06	19750.0	2955.5	3572.8	13.73	.0503	104.3	6988.2	1.408E-03	3.624E+06
1.122	10.06	19740.5	2957.0	3574.5	13.72	.0503	104.3	6989.7	1.407E-03	3.620E+06
1.126	10.06	19730.4	2958.4	3576.4	13.72	.0503	104.4	6991.3	1.406E-03	3.616E+06
1.130	10.06	19720.3	2960.3	3578.4	13.72	.0503	104.5	6993.0	1.405E-03	3.611E+06
1.134	10.06	19710.1	2962.1	3580.5	13.72	.0503	104.6	6994.4	1.404E-03	3.606E+06
1.138	10.06	19700.1	2963.9	3582.7	13.72	.0503	104.7	6996.6	1.403E-03	3.601E+06
1.142	10.06	19690.3	2965.6	3584.8	13.71	.0503	104.7	6996.6	1.402E-03	3.596E+06
1.147	10.06	19680.9	2967.4	3586.8	13.71	.0503	104.8	7000.2	1.400E-03	3.592E+06
1.151	10.06	19671.7	2969.0	3588.8	13.71	.0503	104.9	7001.8	1.399E-03	3.587E+06
1.155	10.06	19662.9	2970.5	3590.6	13.71	.0503	105.0	7003.4	1.398E-03	3.583E+06
1.160	10.06	19654.4	2971.9	3592.3	13.71	.0503	105.0	7004.8	1.397E-03	3.579E+06
1.164	10.06	19646.3	2973.2	3593.7	13.71	.0503	105.1	7006.1	1.396E-03	3.575E+06
1.168	10.06	19638.4	2974.2	3595.0	13.71	.0503	105.1	7007.2	1.395E-03	3.571E+06
1.172	10.06	19630.5	2975.2	3596.1	13.71	.0502	105.2	7008.4	1.394E-03	3.568E+06
1.176	10.06	19622.8	2975.9	3596.9	13.71	.0502	105.2	7008.8	1.393E-03	3.565E+06
1.180	10.06	19615.4	2976.5	3597.5	13.70	.0502	105.2	7009.6	1.392E-03	3.561E+06
1.184	10.06	19607.4	2976.9	3597.9	13.70	.0502	105.2	7009.6	1.391E-03	3.559E+06
1.188	10.07	19599.5	2977.1	3598.1	13.70	.0502	105.2	7009.4	1.391E-03	3.557E+06
1.193	10.07	19591.4	2977.2	3598.2	13.70	.0501	105.2	7009.9	1.390E-03	3.555E+06
1.197	10.07	19583.0	2977.2	3598.1	13.70	.0501	105.2	7009.8	1.389E-03	3.554E+06
1.201	10.07	19574.4	2977.1	3597.8	13.70	.0501	105.2	7009.6	1.389E-03	3.554E+06
1.205	10.07	19565.4	2976.9	3597.4	13.70	.0500	105.2	7009.2	1.389E-03	3.552E+06
1.209	10.07	19556.0	2976.6	3596.9	13.70	.0500	105.2	7008.8	1.388E-03	3.551E+06
1.214	10.07	19546.4	2976.2	3596.3	13.70	.0500	105.2	7008.3	1.387E-03	3.549E+06
1.218	10.08	19536.4	2975.8	3595.6	13.71	.0500	105.2	7007.7	1.386E-03	3.548E+06
1.222	10.08	19526.0	2975.2	3594.8	13.71	.0500	105.1	7007.0	1.386E-03	3.547E+06
1.226	10.08	19515.3	2974.6	3593.9	13.71	.0500	105.1	7006.2	1.385E-03	3.546E+06
1.230	10.08	19504.4	2974.0	3592.9	13.71	.0500	105.1	7005.4	1.384E-03	3.544E+06
1.234	10.08	19493.2	2973.3	3591.9	13.71	.0500	105.0	7004.5	1.383E-03	3.543E+06
AVERAGE		19717.7	2957.9	3575.3	13.73	.0562	104.3	6990.4	1.404E-03	3.612E+06

RUN	497	WTR	1333	CO-AXIAL THERMOCOUPLE	SHAKEDOWN TEST	12/10/79	12/12/79	13 IM	13 0001	14 IM	14 0001	15 IM	15 0001
TIME	ALPHA	61 0001	62 0001	63 0001	11 IM	11 0001	12 IM	12 0001	13 IM	13 0001	14 IM	14 0001	15 IM
1.006	10.01	1.523	4.234	8.860	250.64	83.431	112.82	18.233	75.88	82.55	4.907	94.01	10.415
1.010	10.01	1.523	4.234	8.858	250.67	83.431	112.86	18.182	75.86	82.59	4.900	94.05	10.387
1.014	10.01	1.523	4.230	8.857	250.77	83.775	113.07	18.207	75.88	82.64	4.910	94.12	10.403
1.018	10.01	1.522	4.227	8.855	250.62	83.611	113.25	18.167	75.92	82.66	4.900	94.22	10.376
1.022	10.02	1.522	4.225	8.855	250.19	83.759	113.35	18.181	75.92	82.71	4.906	94.33	10.376
1.027	10.02	1.522	4.222	8.854	250.89	83.090	113.46	18.205	75.92	82.74	4.916	94.36	10.399
1.031	10.02	1.522	4.220	8.855	251.46	83.659	113.66	18.159	75.94	82.74	4.905	94.43	10.391
1.035	10.02	1.522	4.217	8.855	250.17	83.436	113.78	18.180	75.96	82.82	4.912	94.54	10.407
1.039	10.03	1.522	4.215	8.857	250.59	83.755	113.88	18.131	75.97	82.84	4.904	94.61	10.385
1.043	10.03	1.523	4.213	8.859	250.16	83.013	113.92	18.130	75.97	82.84	4.908	94.68	10.409
1.047	10.03	1.523	4.210	8.861	250.72	84.084	114.06	18.166	75.98	82.93	4.903	94.75	10.440
1.051	10.04	1.523	4.208	8.864	260.43	83.446	114.20	18.096	76.00	82.94	4.889	94.82	10.423
1.054	10.04	1.524	4.206	8.867	261.14	83.911	114.31	18.115	76.03	83.00	4.900	94.93	10.440
1.058	10.04	1.524	4.205	8.871	261.71	83.701	114.42	18.069	76.02	83.02	4.885	95.00	10.424
1.064	10.05	1.524	4.203	8.875	262.27	83.750	114.52	18.070	76.03	83.04	4.879	95.07	10.439
1.068	10.05	1.525	4.202	8.880	262.84	83.485	114.70	18.043	76.05	83.04	4.886	95.18	10.465
1.072	10.05	1.525	4.200	8.885	263.54	83.686	114.88	18.057	76.07	83.16	4.876	95.28	10.452
1.076	10.05	1.526	4.199	8.890	264.11	83.753	114.88	18.093	76.07	83.16	4.861	95.35	10.457
1.081	10.06	1.526	4.198	8.896	264.54	83.535	115.02	18.055	76.07	83.17	4.866	95.39	10.430
1.085	10.06	1.526	4.194	8.902	265.10	83.629	115.16	18.072	76.11	83.23	4.872	95.50	10.454
1.089	10.06	1.527	4.197	8.908	265.67	83.742	115.30	18.112	76.12	83.27	4.880	95.57	10.480
1.093	10.06	1.527	4.197	8.914	266.23	83.494	115.37	18.040	76.11	83.24	4.867	95.64	10.450
1.097	10.06	1.527	4.197	8.920	266.80	83.429	115.48	18.074	76.12	83.32	4.872	95.67	10.441
1.101	10.06	1.527	4.197	8.927	267.51	83.548	115.65	18.081	76.16	83.34	4.878	95.81	10.454
1.105	10.06	1.527	4.197	8.933	268.03	83.571	115.76	18.074	76.17	83.40	4.870	95.85	10.459
1.110	10.06	1.527	4.197	8.939	268.36	83.688	115.87	18.108	76.17	83.44	4.881	95.89	10.471
1.114	10.06	1.527	4.197	8.944	268.06	83.425	115.97	18.048	76.18	83.44	4.876	95.99	10.471
1.117	10.06	1.527	4.196	8.950	268.63	83.742	116.11	18.063	76.20	83.50	4.883	96.10	10.467
1.121	10.06	1.527	4.196	8.955	269.20	83.657	116.22	18.062	76.24	83.53	4.883	96.17	10.474
1.124	10.06	1.527	4.196	8.960	270.76	83.679	116.33	18.048	76.22	83.54	4.888	96.24	10.490
1.130	10.06	1.527	4.194	8.965	271.33	83.694	116.43	18.061	76.26	83.61	4.893	96.27	10.499
1.134	10.06	1.526	4.194	8.969	272.18	83.711	116.57	18.061	76.26	83.63	4.893	96.42	10.505
1.138	10.06	1.526	4.194	8.973	272.60	83.717	116.66	18.048	76.27	83.67	4.905	96.49	10.512
1.142	10.06	1.526	4.200	8.976	273.03	83.782	116.75	18.043	76.26	83.71	4.906	96.52	10.533
1.147	10.06	1.525	4.200	8.979	273.59	83.917	116.86	18.044	76.27	83.74	4.904	96.63	10.534
1.151	10.06	1.525	4.200	8.981	274.30	83.782	117.03	18.042	76.30	83.77	4.910	96.70	10.536
1.155	10.06	1.524	4.200	8.983	274.87	83.746	117.14	18.042	76.33	83.81	4.917	96.81	10.544
1.160	10.06	1.524	4.199	8.984	275.29	83.739	117.25	18.035	76.33	83.84	4.916	96.84	10.553
1.164	10.06	1.524	4.194	8.985	276.00	83.949	117.35	18.064	76.31	83.87	4.921	96.91	10.574
1.168	10.06	1.522	4.194	8.985	276.42	83.633	117.49	17.998	76.34	83.94	4.908	97.02	10.544
1.172	10.06	1.521	4.197	8.985	276.99	83.759	117.60	18.042	76.37	83.94	4.927	97.09	10.564
1.176	10.06	1.521	4.196	8.983	277.56	83.444	117.67	17.974	76.36	83.97	4.907	97.16	10.536
1.180	10.06	1.520	4.195	8.982	278.12	83.403	117.78	18.004	76.36	84.00	4.910	97.19	10.448
1.184	10.06	1.514	4.193	8.980	278.55	83.559	117.92	17.997	76.41	84.00	4.912	97.30	10.562
1.189	10.07	1.519	4.191	8.977	279.11	83.255	118.02	17.947	76.42	84.04	4.901	97.41	10.524
1.193	10.07	1.514	4.184	8.974	279.54	83.402	118.10	17.945	76.46	84.04	4.900	97.44	10.536
1.197	10.07	1.517	4.184	8.970	280.39	83.174	118.20	17.939	76.41	84.12	4.890	97.51	10.514
1.201	10.07	1.516	4.184	8.968	280.67	82.974	118.34	17.901	76.45	84.17	4.878	97.58	10.492
1.205	10.07	1.516	4.181	8.961	281.09	83.014	118.41	17.913	76.46	84.21	4.877	97.65	10.501
1.209	10.07	1.515	4.174	8.956	281.52	82.906	118.52	17.869	76.44	84.22	4.866	97.69	10.480
1.214	10.07	1.514	4.174	8.950	282.09	82.643	118.59	17.863	76.43	84.24	4.853	97.73	10.464
1.218	10.08	1.514	4.171	8.944	282.37	82.774	118.73	17.867	76.48	84.24	4.872	97.83	10.494
1.222	10.08	1.513	4.167	8.937	282.79	82.436	118.84	17.876	76.51	84.31	4.853	97.94	10.452
1.226	10.08	1.512	4.161	8.930	283.40	82.405	118.94	17.874	76.48	84.37	4.859	97.97	10.471
1.230	10.08	1.511	4.154	8.923	283.93	82.132	119.02	17.749	76.49	84.37	4.852	98.01	10.434
1.234	10.08	1.511	4.154	8.915	284.35	82.047	119.16	17.746	76.53	84.34	4.854	98.04	10.445

MIN 497 WTR 1333 CO-AXIAL THERMOCOUPLE SHARPDOWN TR-51 12/10/79-12/12/79

TIME	ALPHA	PO	TO	TOJ	WALCH	PINT	TIME	UINF	HHOINF	REINF
1.23	10.00	19481.7	2972.5	3590.1	13.71	.0557	105.0	7003.5	1.383E-03	3.542E+06
1.24	10.00	19479.0	2971.6	3589.5	13.71	.0556	104.9	7002.4	1.382E-03	3.541E+06
1.25	10.00	19476.0	2970.7	3588.2	13.71	.0556	104.9	7001.4	1.381E-03	3.540E+06
1.26	10.00	19473.0	2969.8	3586.6	13.71	.0555	104.8	7000.1	1.380E-03	3.539E+06
1.27	10.00	19470.0	2968.9	3585.4	13.71	.0555	104.8	6998.9	1.379E-03	3.538E+06
1.28	10.00	19467.0	2968.0	3584.3	13.71	.0554	104.7	6997.6	1.378E-03	3.537E+06
1.29	10.00	19464.0	2967.1	3583.2	13.71	.0554	104.7	6996.4	1.377E-03	3.536E+06
1.30	10.00	19461.0	2966.2	3582.1	13.71	.0553	104.6	6995.0	1.376E-03	3.535E+06
1.31	10.00	19458.0	2965.3	3581.0	13.71	.0553	104.6	6993.4	1.375E-03	3.534E+06
1.32	10.00	19455.0	2964.4	3579.9	13.71	.0552	104.5	6992.3	1.374E-03	3.533E+06
1.33	10.00	19452.0	2963.5	3578.8	13.71	.0552	104.5	6991.2	1.373E-03	3.532E+06
1.34	10.00	19449.0	2962.6	3577.7	13.71	.0551	104.4	6990.1	1.372E-03	3.531E+06
1.35	10.00	19446.0	2961.7	3576.6	13.71	.0551	104.4	6989.0	1.371E-03	3.530E+06
1.36	10.00	19443.0	2960.8	3575.5	13.71	.0550	104.3	6987.9	1.370E-03	3.529E+06
1.37	10.00	19440.0	2959.9	3574.4	13.71	.0550	104.3	6986.8	1.369E-03	3.528E+06
1.38	10.00	19437.0	2959.0	3573.3	13.71	.0549	104.2	6985.7	1.368E-03	3.527E+06
1.39	10.00	19434.0	2958.1	3572.2	13.71	.0549	104.2	6984.6	1.367E-03	3.526E+06
1.40	10.00	19431.0	2957.2	3571.1	13.71	.0548	104.1	6983.5	1.366E-03	3.525E+06
1.41	10.00	19428.0	2956.3	3570.0	13.71	.0548	104.1	6982.4	1.365E-03	3.524E+06
1.42	10.00	19425.0	2955.4	3568.9	13.71	.0547	103.9	6981.3	1.364E-03	3.523E+06
1.43	10.00	19422.0	2954.5	3567.8	13.71	.0547	103.9	6980.2	1.363E-03	3.522E+06
1.44	10.00	19419.0	2953.6	3566.7	13.71	.0546	103.8	6979.1	1.362E-03	3.521E+06
1.45	10.00	19416.0	2952.7	3565.6	13.71	.0546	103.8	6978.0	1.361E-03	3.520E+06
1.46	10.00	19413.0	2951.8	3564.5	13.71	.0545	103.7	6976.9	1.360E-03	3.519E+06
1.47	10.00	19410.0	2950.9	3563.4	13.71	.0545	103.7	6975.8	1.359E-03	3.518E+06
1.48	10.00	19407.0	2950.0	3562.3	13.71	.0544	103.6	6974.7	1.358E-03	3.517E+06
1.49	10.00	19404.0	2949.1	3561.2	13.71	.0544	103.6	6973.6	1.357E-03	3.516E+06
1.50	10.00	19401.0	2948.2	3560.1	13.71	.0543	103.5	6972.5	1.356E-03	3.515E+06
1.51	10.00	19398.0	2947.3	3559.0	13.71	.0543	103.5	6971.4	1.355E-03	3.514E+06
1.52	10.00	19395.0	2946.4	3557.9	13.71	.0542	103.4	6970.3	1.354E-03	3.513E+06
1.53	10.00	19392.0	2945.5	3556.8	13.71	.0542	103.4	6969.2	1.353E-03	3.512E+06
1.54	10.00	19389.0	2944.6	3555.7	13.71	.0541	103.3	6968.1	1.352E-03	3.511E+06
1.55	10.00	19386.0	2943.7	3554.6	13.71	.0541	103.3	6967.0	1.351E-03	3.510E+06
1.56	10.00	19383.0	2942.8	3553.5	13.71	.0540	103.2	6965.9	1.350E-03	3.509E+06
1.57	10.00	19380.0	2941.9	3552.4	13.71	.0540	103.2	6964.8	1.349E-03	3.508E+06
1.58	10.00	19377.0	2941.0	3551.3	13.71	.0539	103.1	6963.7	1.348E-03	3.507E+06
1.59	10.00	19374.0	2940.1	3550.2	13.71	.0539	103.1	6962.6	1.347E-03	3.506E+06
1.60	10.00	19371.0	2939.2	3549.1	13.71	.0538	103.0	6961.5	1.346E-03	3.505E+06
1.61	10.00	19368.0	2938.3	3548.0	13.71	.0538	103.0	6960.4	1.345E-03	3.504E+06
1.62	10.00	19365.0	2937.4	3546.9	13.71	.0537	102.9	6959.3	1.344E-03	3.503E+06
1.63	10.00	19362.0	2936.5	3545.8	13.71	.0537	102.9	6958.2	1.343E-03	3.502E+06
1.64	10.00	19359.0	2935.6	3544.7	13.71	.0536	102.8	6957.1	1.342E-03	3.501E+06
1.65	10.00	19356.0	2934.7	3543.6	13.71	.0536	102.8	6956.0	1.341E-03	3.500E+06
1.66	10.00	19353.0	2933.8	3542.5	13.71	.0535	102.7	6954.9	1.340E-03	3.499E+06
1.67	10.00	19350.0	2932.9	3541.4	13.71	.0535	102.7	6953.8	1.339E-03	3.498E+06
1.68	10.00	19347.0	2932.0	3540.3	13.71	.0534	102.6	6952.7	1.338E-03	3.497E+06
1.69	10.00	19344.0	2931.1	3539.2	13.71	.0534	102.6	6951.6	1.337E-03	3.496E+06
1.70	10.00	19341.0	2930.2	3538.1	13.71	.0533	102.5	6950.5	1.336E-03	3.495E+06
1.71	10.00	19338.0	2929.3	3537.0	13.71	.0533	102.5	6949.4	1.335E-03	3.494E+06
1.72	10.00	19335.0	2928.4	3535.9	13.71	.0532	102.4	6948.3	1.334E-03	3.493E+06
1.73	10.00	19332.0	2927.5	3534.8	13.71	.0532	102.4	6947.2	1.333E-03	3.492E+06
1.74	10.00	19329.0	2926.6	3533.7	13.71	.0531	102.3	6946.1	1.332E-03	3.491E+06
1.75	10.00	19326.0	2925.7	3532.6	13.71	.0531	102.3	6945.0	1.331E-03	3.490E+06
1.76	10.00	19323.0	2924.8	3531.5	13.71	.0530	102.2	6943.9	1.330E-03	3.489E+06
1.77	10.00	19320.0	2923.9	3530.4	13.71	.0530	102.2	6942.8	1.329E-03	3.488E+06
1.78	10.00	19317.0	2923.0	3529.3	13.71	.0529	102.1	6941.7	1.328E-03	3.487E+06
1.79	10.00	19314.0	2922.1	3528.2	13.71	.0529	102.1	6940.6	1.327E-03	3.486E+06
1.80	10.00	19311.0	2921.2	3527.1	13.71	.0528	102.0	6939.5	1.326E-03	3.485E+06
1.81	10.00	19308.0	2920.3	3526.0	13.71	.0528	102.0	6938.4	1.325E-03	3.484E+06
1.82	10.00	19305.0	2919.4	3524.9	13.71	.0527	101.9	6937.3	1.324E-03	3.483E+06
1.83	10.00	19302.0	2918.5	3523.8	13.71	.0527	101.9	6936.2	1.323E-03	3.482E+06
1.84	10.00	19299.0	2917.6	3522.7	13.71	.0526	101.8	6935.1	1.322E-03	3.481E+06
1.85	10.00	19296.0	2916.7	3521.6	13.71	.0526	101.8	6934.0	1.321E-03	3.480E+06
1.86	10.00	19293.0	2915.8	3520.5	13.71	.0525	101.7	6932.9	1.320E-03	3.479E+06
1.87	10.00	19290.0	2914.9	3519.4	13.71	.0525	101.7	6931.8	1.319E-03	3.478E+06
1.88	10.00	19287.0	2914.0	3518.3	13.71	.0524	101.6	6930.7	1.318E-03	3.477E+06
1.89	10.00	19284.0	2913.1	3517.2	13.71	.0524	101.6	6929.6	1.317E-03	3.476E+06
1.90	10.00	19281.0	2912.2	3516.1	13.71	.0523	101.5	6928.5	1.316E-03	3.475E+06
1.91	10.00	19278.0	2911.3	3515.0	13.71	.0523	101.5	6927.4	1.315E-03	3.474E+06
1.92	10.00	19275.0	2910.4	3513.9	13.71	.0522	101.4	6926.3	1.314E-03	3.473E+06
1.93	10.00	19272.0	2909.5	3512.8	13.71	.0522	101.4	6925.2	1.313E-03	3.472E+06
1.94	10.00	19269.0	2908.6	3511.7	13.71	.0521	101.3	6924.1	1.312E-03	3.471E+06
1.95	10.00	19266.0	2907.7	3510.6	13.71	.0521	101.3	6923.0	1.311E-03	3.470E+06
1.96	10.00	19263.0	2906.8	3509.5	13.71	.0520	101.2	6921.9	1.310E-03	3.469E+06
1.97	10.00	19260.0	2905.9	3508.4	13.71	.0520	101.2	6920.8	1.309E-03	3.468E+06
1.98	10.00	19257.0	2905.0	3507.3	13.71	.0519	101.1	6919.7	1.308E-03	3.467E+06
1.99	10.00	19254.0	2904.1	3506.2	13.71	.0519	101.1	6918.6	1.307E-03	3.466E+06
2.00	10.00	19251.0	2903.2	3505.1	13.71	.0518	101.0	6917.5	1.306E-03	3.465E+06
2.01	10.00	19248.0	2902.3	3504.0	13.71	.0518	101.0	6916.4	1.305E-03	3.464E+06
2.02	10.00	19245.0	2901.4	3502.9	13.71	.0517	100.9	6915.3	1.304E-03	3.463E+06
2.03	10.00	19242.0	2900.5	3501.8	13.71	.0517	100.9	6914.2	1.303E-03	3.462E+06
2.04	10.00	19239.0	2899.6	3500.7	13.71	.0516	100.8	6913.1	1.302E-03	3.461E+06
2.05	10.00	19236.0	2898.7	3499.6	13.71	.0516	100.8	6912.0	1.301E-03	3.460E+06
2.06	10.00	19233.0	2897.8	3498.5	13.71	.0515	100.7	6910.9	1.300E-03	3.459E+06
2.07	10.00	19230.0	2896.9	3497.4	13.71	.0515	100.7	6909.8	1.299E-03	3.458E+06
2.08	10.00	19227.0	2896.0	3496.3	13.71	.0514	100.6	6908.7	1.298E-03	3.457E+06
2.09	10.00	19224.0	2895.1	3495.2	13.71	.0514	100.6	6907.6	1.297E-03	3.456E+06
2.10	10.00	19221.0	2894.2	3494.1	13.71	.0513	100.5	6906.5	1.296E-03	3.455E+06
2.11	10.00	19218.0	2893.3	3493.0	13.71	.0513	100.5	6905.4	1.295E-03	3.454E+06
2.12	10.00	19215.0	2892.4	3491.9	13.71	.0512	100.4	6904.3	1.294E-03	3.453E+06
2.13	10.00	19212.0	2891.5	3490.8	13.71	.0512	100.4	6903.2	1.293E-03	3.452E+06
2.14	10.00	19209.0	2890.6	3489.7	13.71	.0511	100.3	6902.1	1.292E-03	3.451E+06
2.15	10.00	19206.0	2889.7	3488.6	13.71	.0511	100.3	6901.0	1.291E-03	3.450E+06
2.16	10.00	19203.0	2888.8	3487.5	13.71	.0510	100.2	6900.0	1.290E-03	3.449E+06
2.17	10.00	19200.0	2887.9	3486.4	13.71	.0510	100.2	6898.9	1.289E-03	3.448E+06
2.18	10.00	19197.0	2887.0	3485.3	13.71	.0509	100.1	6897.8	1.288E-03	3.447E+06
2.19	10.00	19194.0	2886.1	3484.2						

RUN	497	WTR	133J	CO-AXIAL	INTEMOUCUPLE	SHAKEDOWN	TEST	12/10/79-12/12/79	T3 TW	T3 QDOT	T4 T	T4 QDOT	T5 TW	T5
TIME	ALPHA	G1 QDOT	G2 QDOT	G3 QDOT	I1 TW	I1 QDOT	T2 TW	T2 QDOT	T3 TW	T3 QDOT	T4 T	T4 QDOT	T5 TW	T5
1.234	10.09	1.510	4.149	8.906	284.34	82.032	119.23	17.724	76.53	1.742	84.42	4.852	98.19	10.435
1.243	10.09	1.509	4.144	8.897	285.34	81.057	119.37	17.698	76.53	1.740	84.42	4.851	98.22	10.435
1.247	10.09	1.508	4.139	8.887	285.77	81.094	119.44	17.718	76.53	1.740	84.42	4.861	98.29	10.463
1.251	10.09	1.507	4.133	8.877	286.33	81.436	119.44	17.640	76.58	1.741	84.42	4.840	98.40	10.424
1.255	10.09	1.506	4.128	8.866	286.61	81.492	119.56	17.610	76.59	1.739	84.42	4.838	98.43	10.423
1.259	10.09	1.505	4.122	8.854	287.04	81.480	119.65	17.586	76.58	1.735	84.42	4.834	98.47	10.412
1.263	10.09	1.505	4.114	8.842	287.18	81.440	119.76	17.586	76.58	1.733	84.42	4.835	98.54	10.416
1.264	10.09	1.502	4.109	8.829	287.75	81.489	119.86	17.575	76.60	1.732	84.42	4.833	98.61	10.416
1.272	10.09	1.500	4.103	8.816	288.31	81.149	119.94	17.494	76.61	1.731	84.42	4.809	98.68	10.376
1.274	10.10	1.499	4.099	8.801	288.74	81.090	120.01	17.482	76.60	1.733	84.42	4.802	98.75	10.366
1.280	10.10	1.497	4.089	8.786	289.16	81.177	120.11	17.503	76.60	1.732	84.42	4.804	98.79	10.369
1.284	10.10	1.495	4.081	8.769	289.73	80.935	120.22	17.444	76.65	1.726	84.42	4.783	98.86	10.327
1.288	10.10	1.492	4.073	8.752	290.01	80.951	120.24	17.443	76.67	1.730	84.42	4.774	98.93	10.323
1.293	10.10	1.490	4.065	8.733	290.44	80.550	120.32	17.381	76.63	1.725	84.42	4.752	98.96	10.275
1.297	10.10	1.487	4.056	8.714	290.86	80.554	120.43	17.364	76.64	1.724	84.42	4.753	99.00	10.275
1.301	10.10	1.484	4.047	8.693	291.28	80.496	120.54	17.371	76.69	1.727	84.42	4.749	99.11	10.283
1.304	10.10	1.480	4.038	8.671	291.71	80.351	120.61	17.302	76.71	1.723	84.42	4.726	99.14	10.242
1.313	10.11	1.473	4.024	8.648	291.85	80.257	120.64	17.255	76.68	1.729	84.42	4.724	99.14	10.242
1.317	10.11	1.464	4.017	8.624	292.42	79.444	120.78	17.141	76.69	1.725	84.42	4.705	99.21	10.197
1.322	10.11	1.464	4.006	8.598	292.98	79.789	120.89	17.140	76.72	1.722	84.42	4.699	99.28	10.188
1.326	10.11	1.464	3.995	8.571	293.12	79.792	120.96	17.153	76.74	1.716	84.42	4.699	99.32	10.184
1.328	10.11	1.454	3.982	8.543	293.41	79.794	121.03	17.063	76.72	1.709	84.42	4.677	99.39	10.141
1.330	10.11	1.453	3.969	8.513	293.83	79.115	121.04	16.991	76.72	1.708	84.42	4.663	99.42	10.119
1.334	10.11	1.444	3.956	8.482	294.26	78.534	121.14	16.939	76.75	1.703	84.42	4.654	99.49	10.100
1.338	10.11	1.441	3.942	8.449	294.54	78.700	121.21	16.881	76.77	1.690	85.01	4.644	99.57	10.073
1.342	10.11	1.435	3.927	8.415	294.68	78.452	121.21	16.854	76.76	1.684	85.01	4.644	99.60	10.074
1.347	10.12	1.424	3.911	8.379	295.25	78.074	121.28	16.720	76.76	1.671	85.01	4.614	99.64	10.003
1.351	10.12	1.421	3.895	8.341	295.53	77.406	121.35	16.655	76.79	1.668	85.01	4.609	99.67	9.979
1.354	10.12	1.413	3.877	8.303	295.81	77.484	121.35	16.561	76.79	1.660	85.01	4.597	99.71	9.944
1.354	10.12	1.407	3.859	8.263	295.96	77.192	121.42	16.464	76.77	1.666	85.01	4.575	99.74	9.894
1.363	10.12	1.397	3.841	8.221	296.24	77.146	121.46	16.428	76.77	1.661	85.01	4.568	99.78	9.856
1.367	10.12	1.389	3.821	8.178	296.52	76.780	121.56	16.278	76.80	1.624	85.01	4.537	99.85	9.724
1.371	10.13	1.380	3.801	8.134	296.80	76.193	121.60	16.148	76.80	1.622	85.01	4.526	99.88	9.724
1.374	10.13	1.370	3.780	8.087	296.80	75.748	121.60	16.049	76.79	1.611	85.01	4.505	99.88	9.664
1.380	10.13	1.361	3.759	8.040	297.04	75.450	121.63	16.010	76.78	1.605	85.01	4.485	99.88	9.604
1.384	10.13	1.351	3.734	7.992	297.23	75.443	121.67	15.905	76.82	1.597	85.01	4.463	99.95	9.551
1.384	10.13	1.341	3.713	7.942	297.37	74.331	121.63	15.735	76.82	1.591	85.01	4.427	99.95	9.464
1.392	10.13	1.331	3.690	7.891	297.51	74.011	121.63	15.648	76.80	1.575	85.01	4.409	99.95	9.420
1.394	10.13	1.320	3.664	7.839	297.80	73.797	121.70	15.575	76.81	1.570	85.01	4.390	99.95	9.380
1.401	10.14	1.310	3.641	7.786	297.94	73.151	121.70	15.405	76.83	1.553	85.01	4.352	99.99	9.292
1.405	10.14	1.299	3.614	7.731	298.08	72.924	121.70	15.307	76.83	1.545	85.01	4.332	100.03	9.252
1.409	10.14	1.287	3.590	7.674	298.08	72.148	121.70	15.133	76.82	1.534	85.01	4.286	99.99	9.166
1.413	10.14	1.277	3.564	7.620	298.22	71.409	121.67	15.032	76.82	1.524	85.01	4.259	99.99	9.124
1.417	10.14	1.265	3.534	7.563	298.22	71.561	121.70	14.954	76.84	1.512	85.01	4.241	100.04	9.095
1.421	10.14	1.254	3.511	7.505	298.22	71.024	121.70	14.804	76.84	1.498	85.01	4.206	100.04	9.024
1.424	10.14	1.243	3.484	7.446	298.36	70.789	121.67	14.724	76.82	1.495	85.01	4.190	100.04	8.996
1.430	10.14	1.231	3.457	7.387	298.36	70.052	121.67	14.543	76.81	1.476	85.01	4.146	100.04	8.912
1.434	10.14	1.220	3.430	7.327	298.50	69.473	121.67	14.443	76.82	1.462	85.01	4.127	100.10	8.871
1.438	10.14	1.208	3.402	7.266	298.50	69.454	121.63	14.367	76.85	1.441	85.01	4.113	100.13	8.837
1.442	10.14	1.197	3.375	7.204	298.50	68.428	121.60	14.197	76.82	1.448	85.01	4.074	100.10	8.754
1.444	10.14	1.186	3.347	7.143	298.50	68.415	121.60	14.106	76.80	1.434	85.01	4.058	100.10	8.727
1.450	10.14	1.174	3.320	7.080	298.64	67.441	121.60	13.940	76.83	1.417	85.01	4.023	100.13	8.637
1.454	10.14	1.163	3.292	7.018	298.64	67.417	121.53	13.845	76.85	1.412	85.01	4.007	100.17	8.542
1.454	10.14	1.152	3.265	6.955	298.79	67.252	121.53	13.764	76.82	1.408	85.01	3.989	100.13	8.544
1.464	10.14	1.141	3.237	6.892	298.64	66.559	121.49	13.591	76.80	1.393	85.01	3.955	100.10	8.454

TIME	ALPHA	WFO 1333	STATION NUMBERS	CO-AXIAL FREQUENCY	SPREADS	TEST	1/10/74-12/1/74
	01 ST	02 ST	03 ST	11 ST	12 ST	14 ST	15 ST
123	10.16	1.76E-04	5.245E-04	1.002E-03	1.030E-02	2.410E-03	2.185E-04
124	10.15	1.76E-04	5.234E-04	1.002E-03	1.027E-02	2.405E-03	2.177E-04
125	10.14	1.76E-04	5.197E-04	1.001E-03	1.026E-02	2.395E-03	2.171E-04
126	10.12	1.73E-04	5.155E-04	1.001E-03	1.027E-02	2.386E-03	2.170E-04
127	10.11	1.72E-04	5.125E-04	1.002E-03	1.026E-02	2.377E-03	2.170E-04
128	10.10	1.71E-04	5.095E-04	1.002E-03	1.027E-02	2.368E-03	2.168E-04
129	10.09	1.70E-04	5.065E-04	1.002E-03	1.025E-02	2.357E-03	2.158E-04
130	10.08	1.70E-04	5.046E-04	1.002E-03	1.025E-02	2.350E-03	2.156E-04
131	10.07	1.69E-04	5.027E-04	1.002E-03	1.027E-02	2.343E-03	2.160E-04
132	10.06	1.69E-04	5.011E-04	1.002E-03	1.027E-02	2.331E-03	2.158E-04
133	10.05	1.68E-04	4.994E-04	1.002E-03	1.025E-02	2.328E-03	2.157E-04
134	10.04	1.68E-04	4.966E-04	1.002E-03	1.026E-02	2.318E-03	2.153E-04
135	10.03	1.67E-04	4.979E-04	1.002E-03	1.030E-02	2.312E-03	2.150E-04
136	10.02	1.67E-04	4.973E-04	1.002E-03	1.032E-02	2.304E-03	2.147E-04
137	10.01	1.67E-04	4.966E-04	1.002E-03	1.033E-02	2.294E-03	2.147E-04
138	10.00	1.66E-04	4.966E-04	1.002E-03	1.037E-02	2.284E-03	2.140E-04
139	9.99	1.65E-04	4.965E-04	1.002E-03	1.037E-02	2.284E-03	2.128E-04
140	9.98	1.65E-04	4.965E-04	1.002E-03	1.040E-02	2.276E-03	2.121E-04
141	9.97	1.64E-04	4.966E-04	1.002E-03	1.043E-02	2.273E-03	2.114E-04
142	9.96	1.64E-04	4.972E-04	1.002E-03	1.043E-02	2.268E-03	2.104E-04
143	9.95	1.64E-04	4.976E-04	1.002E-03	1.046E-02	2.264E-03	2.091E-04
144	9.94	1.64E-04	4.981E-04	1.002E-03	1.046E-02	2.264E-03	2.086E-04
145	9.93	1.65E-04	4.997E-04	1.002E-03	1.046E-02	2.265E-03	2.086E-04
146	9.93	1.65E-04	5.010E-04	1.002E-03	1.051E-02	2.267E-03	2.086E-04
147	9.92	1.65E-04	5.025E-04	1.002E-03	1.051E-02	2.267E-03	2.086E-04
148	9.91	1.65E-04	5.041E-04	1.002E-03	1.053E-02	2.269E-03	2.086E-04
149	9.90	1.66E-04	5.059E-04	1.002E-03	1.052E-02	2.268E-03	2.086E-04
150	9.89	1.66E-04	5.079E-04	1.002E-03	1.054E-02	2.270E-03	2.078E-04
151	9.88	1.66E-04	5.100E-04	1.002E-03	1.055E-02	2.275E-03	2.084E-04
152	9.88	1.66E-04	5.121E-04	1.002E-03	1.054E-02	2.276E-03	2.084E-04
153	9.88	1.67E-04	5.142E-04	1.002E-03	1.054E-02	2.276E-03	2.090E-04
154	9.87	1.67E-04	5.163E-04	1.002E-03	1.053E-02	2.274E-03	2.092E-04
155	9.87	1.67E-04	5.183E-04	1.002E-03	1.052E-02	2.274E-03	2.093E-04
156	9.86	1.68E-04	5.202E-04	1.002E-03	1.054E-02	2.274E-03	2.093E-04
157	9.86	1.68E-04	5.219E-04	1.002E-03	1.051E-02	2.274E-03	2.094E-04
158	9.86	1.68E-04	5.233E-04	1.002E-03	1.051E-02	2.274E-03	2.101E-04
159	9.85	1.68E-04	5.245E-04	1.002E-03	1.051E-02	2.274E-03	2.098E-04
160	9.85	1.68E-04	5.254E-04	1.002E-03	1.051E-02	2.274E-03	2.097E-04
161	9.85	1.68E-04	5.260E-04	1.002E-03	1.052E-02	2.274E-03	2.102E-04
162	9.85	1.68E-04	5.263E-04	1.002E-03	1.052E-02	2.274E-03	2.103E-04
163	9.85	1.67E-04	5.260E-04	1.002E-03	1.051E-02	2.274E-03	2.091E-04
164	9.84	1.67E-04	5.254E-04	1.002E-03	1.051E-02	2.274E-03	2.095E-04
165	9.84	1.67E-04	5.245E-04	1.002E-03	1.051E-02	2.274E-03	2.097E-04
166	9.84	1.66E-04	5.234E-04	1.002E-03	1.050E-02	2.274E-03	2.094E-04
167	9.84	1.65E-04	5.221E-04	1.002E-03	1.051E-02	2.274E-03	2.092E-04
168	9.84	1.65E-04	5.207E-04	1.002E-03	1.051E-02	2.274E-03	2.092E-04
169	9.84	1.65E-04	5.191E-04	1.002E-03	1.050E-02	2.263E-03	2.089E-04
170	9.84	1.64E-04	5.175E-04	1.002E-03	1.051E-02	2.263E-03	2.089E-04
171	9.84	1.64E-04	5.159E-04	1.002E-03	1.049E-02	2.257E-03	2.084E-04
172	9.84	1.63E-04	5.142E-04	1.002E-03	1.049E-02	2.251E-03	2.079E-04
173	9.85	1.62E-04	5.127E-04	1.002E-03	1.051E-02	2.250E-03	2.077E-04
174	9.85	1.62E-04	5.112E-04	1.002E-03	1.049E-02	2.241E-03	2.072E-04
175	9.85	1.61E-04	5.094E-04	1.002E-03	1.052E-02	2.242E-03	2.077E-04
176	9.85	1.61E-04	5.085E-04	1.002E-03	1.051E-02	2.234E-03	2.069E-04
177	9.85	1.61E-04	5.074E-04	1.002E-03	1.051E-02	2.232E-03	2.070E-04
178	9.85	1.61E-04	5.074E-04	1.002E-03	1.051E-02	2.232E-03	2.070E-04

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[illegible]

MUN 497		WTH 1333	STANTON NUMBERS			CO-AXIAL THERMOCOUPLE SHAKEDOWN TEST										12/10/79-12/12/79	
TIME	ALPHA	61 ST	62 ST	63 ST	11 ST	12 ST	13 ST	14 ST	15 ST	16 ST	17 ST	18 ST	19 ST	20 ST	21 ST	22 ST	23 ST
291	1.234	1.788E-04	4.925E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
292	1.243	1.789E-04	4.924E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
293	1.247	1.790E-04	4.923E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
294	1.251	1.790E-04	4.922E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
295	1.255	1.791E-04	4.921E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
296	1.259	1.792E-04	4.919E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
297	1.263	1.792E-04	4.917E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
298	1.264	1.792E-04	4.914E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
299	1.272	1.792E-04	4.912E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
300	1.274	1.792E-04	4.909E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
301	1.280	1.792E-04	4.905E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
302	1.284	1.791E-04	4.902E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
303	1.284	1.790E-04	4.898E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
304	1.293	1.789E-04	4.894E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
305	1.297	1.789E-04	4.890E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
306	1.301	1.787E-04	4.886E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
307	1.305	1.786E-04	4.882E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
308	1.309	1.784E-04	4.877E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
309	1.313	1.782E-04	4.873E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
310	1.317	1.780E-04	4.868E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
311	1.322	1.778E-04	4.864E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
312	1.324	1.776E-04	4.859E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
313	1.330	1.775E-04	4.854E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
314	1.334	1.770E-04	4.850E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
315	1.334	1.768E-04	4.845E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
316	1.342	1.764E-04	4.840E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
317	1.347	1.761E-04	4.835E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
318	1.351	1.758E-04	4.830E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
319	1.355	1.754E-04	4.825E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
320	1.354	1.751E-04	4.819E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
321	1.363	1.747E-04	4.813E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
322	1.367	1.742E-04	4.807E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
323	1.371	1.738E-04	4.800E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
324	1.374	1.735E-04	4.792E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
325	1.380	1.728E-04	4.784E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
326	1.384	1.722E-04	4.775E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
327	1.384	1.717E-04	4.765E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
328	1.392	1.710E-04	4.755E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
329	1.394	1.704E-04	4.744E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
330	1.401	1.697E-04	4.730E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
331	1.404	1.690E-04	4.717E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
332	1.404	1.682E-04	4.702E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
333	1.413	1.674E-04	4.687E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
334	1.417	1.666E-04	4.671E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
335	1.421	1.658E-04	4.654E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
336	1.423	1.650E-04	4.637E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
337	1.430	1.641E-04	4.620E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
338	1.434	1.632E-04	4.602E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
339	1.434	1.624E-04	4.584E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
340	1.442	1.616E-04	4.567E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
341	1.444	1.607E-04	4.550E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
342	1.450	1.599E-04	4.534E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
343	1.455	1.592E-04	4.516E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
344	1.454	1.584E-04	4.503E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								
345	1.463	1.577E-04	4.489E-04	1.041E-03	1.033E-02	2.125E-03	2.063E-04	4.760E-04	1.244E-03								

CO-AXIAL THERMOCOUPLE SPARK-ON TEST 12/10/79-12/12/79

TIME	ALPHA	ETA	FO	TO	FOI	MACH	PI/NF	TIME	ULINE	PHOTOF	MEINF
.401	20.13	19051.7	2544.4	3123.0	14.13	.0474	.0474	87.5	6541.3	1.412E-03	4.064E+06
.411	20.30	19064.2	2605.8	3131.0	14.12	.0477	.0477	87.5	6549.5	1.415E-03	4.065E+06
.414	20.46	19077.0	2617.5	3139.0	14.10	.0480	.0480	88.3	6607.0	1.418E-03	4.061E+06
.421	20.61	19087.0	2614.9	3147.0	14.09	.0483	.0483	88.6	6614.1	1.421E-03	4.058E+06
.424	20.76	19100.1	2625.0	3155.4	14.08	.0486	.0486	89.0	6620.4	1.424E-03	4.054E+06
.428	20.84	19113.4	2630.5	3162.8	14.06	.0489	.0489	89.3	6627.5	1.427E-03	4.050E+06
.432	21.01	19127.1	2636.5	3169.8	14.05	.0492	.0492	89.6	6633.4	1.430E-03	4.047E+06
.434	21.12	19144.3	2642.0	3176.7	14.04	.0494	.0494	90.0	6639.4	1.433E-03	4.044E+06
.441	21.22	19162.0	2647.3	3183.4	14.03	.0497	.0497	90.3	6645.3	1.436E-03	4.041E+06
.444	21.32	19181.2	2652.4	3189.4	14.02	.0500	.0500	90.5	6651.7	1.439E-03	4.038E+06
.446	21.40	19201.5	2657.4	3195.3	14.01	.0502	.0502	90.8	6657.4	1.441E-03	4.035E+06
.453	21.48	19222.5	2662.4	3202.6	14.00	.0505	.0505	91.1	6663.1	1.444E-03	4.032E+06
.457	21.56	19243.9	2667.2	3208.6	13.99	.0507	.0507	91.4	6668.6	1.446E-03	4.029E+06
.461	21.61	19265.0	2672.0	3215.0	13.98	.0509	.0509	91.6	6674.1	1.449E-03	4.026E+06
.465	21.67	19285.4	2676.8	3221.1	13.98	.0511	.0511	91.9	6679.6	1.451E-03	4.023E+06
.470	21.72	19304.7	2681.5	3227.0	13.97	.0513	.0513	92.1	6684.4	1.452E-03	4.020E+06
.474	21.78	19322.4	2686.1	3232.4	13.96	.0515	.0515	92.3	6690.1	1.454E-03	4.017E+06
.478	21.79	19338.2	2690.6	3238.6	13.96	.0516	.0516	92.6	6695.7	1.454E-03	4.014E+06
.481	21.82	19351.0	2694.0	3244.2	13.95	.0518	.0518	92.8	6700.7	1.455E-03	4.011E+06
.486	21.84	19363.4	2697.2	3249.5	13.95	.0519	.0519	93.0	6705.0	1.455E-03	4.008E+06
.490	21.85	19372.7	2703.3	3254.6	13.94	.0520	.0520	93.2	6709.5	1.456E-03	4.005E+06
.494	21.88	19380.1	2707.1	3259.4	13.94	.0521	.0521	93.3	6713.8	1.456E-03	4.002E+06
.499	21.88	19385.0	2710.7	3263.0	13.93	.0522	.0522	93.5	6717.7	1.456E-03	4.000E+06
.504	21.88	19390.1	2714.0	3266.0	13.93	.0523	.0523	93.7	6721.4	1.456E-03	3.998E+06
.507	21.85	19393.5	2717.1	3271.6	13.93	.0524	.0524	93.8	6724.8	1.456E-03	3.996E+06
.511	21.83	19398.5	2719.8	3275.2	13.92	.0524	.0524	93.9	6727.4	1.455E-03	3.992E+06
.514	21.81	19399.1	2722.3	3278.2	13.92	.0525	.0525	94.0	6730.5	1.455E-03	3.988E+06
.521	21.74	19405.7	2726.5	3281.0	13.92	.0525	.0525	94.2	6733.0	1.455E-03	3.986E+06
.524	21.72	19410.3	2728.1	3285.0	13.91	.0527	.0527	94.4	6737.0	1.456E-03	3.984E+06
.528	21.68	19416.0	2729.7	3287.5	13.91	.0528	.0528	94.4	6738.7	1.457E-03	3.983E+06
.534	21.63	19422.9	2731.1	3289.5	13.90	.0529	.0529	94.5	6740.3	1.458E-03	3.984E+06
.540	21.58	19431.0	2732.4	3291.0	13.90	.0530	.0530	94.6	6741.8	1.460E-03	3.985E+06
.544	21.53	19440.2	2733.6	3292.7	13.90	.0531	.0531	94.7	6743.3	1.462E-03	3.987E+06
.547	21.47	19450.4	2734.9	3294.4	13.89	.0532	.0532	94.8	6744.8	1.463E-03	3.989E+06
.553	21.41	19461.3	2736.3	3296.2	13.89	.0534	.0534	94.9	6746.3	1.465E-03	3.991E+06
.557	21.34	19472.7	2737.7	3298.2	13.88	.0535	.0535	95.0	6748.0	1.467E-03	3.994E+06
.561	21.27	19484.5	2739.3	3300.3	13.88	.0536	.0536	95.1	6749.9	1.469E-03	3.995E+06
.565	21.20	19495.9	2741.1	3302.6	13.88	.0537	.0537	95.2	6751.4	1.471E-03	3.997E+06
.574	21.04	19507.2	2743.0	3305.1	13.87	.0539	.0539	95.4	6754.1	1.473E-03	3.998E+06
.578	20.95	19517.9	2745.1	3307.6	13.87	.0540	.0540	95.5	6756.5	1.474E-03	3.998E+06
.584	20.87	19527.9	2747.4	3310.7	13.86	.0541	.0541	95.6	6759.0	1.475E-03	3.997E+06
.588	20.77	19537.1	2749.8	3313.8	13.86	.0542	.0542	95.7	6761.7	1.476E-03	3.995E+06
.594	20.68	19545.5	2752.3	3317.0	13.86	.0543	.0543	95.8	6764.6	1.476E-03	3.993E+06
.598	20.58	19553.7	2754.9	3320.3	13.86	.0544	.0544	96.0	6767.5	1.476E-03	3.994E+06
.604	20.48	19562.8	2757.5	3323.6	13.85	.0545	.0545	96.1	6770.5	1.475E-03	3.996E+06
.608	20.38	19571.4	2760.2	3327.0	13.85	.0546	.0546	96.2	6773.5	1.475E-03	3.991E+06
.614	20.27	19576.7	2762.9	3330.4	13.85	.0547	.0547	96.3	6776.5	1.474E-03	3.976E+06
.618	20.17	19581.9	2765.5	3333.7	13.85	.0548	.0548	96.4	6779.4	1.473E-03	3.971E+06
.624	20.06	19587.2	2768.1	3336.9	13.85	.0549	.0549	96.5	6782.3	1.471E-03	3.966E+06
.630	19.94	19592.5	2770.6	3340.1	13.85	.0549	.0549	96.6	6785.1	1.470E-03	3.961E+06
.636	19.83	19597.8	2773.0	3343.1	13.85	.0549	.0549	96.6	6787.8	1.469E-03	3.956E+06
.642	19.71	19603.2	2775.5	3346.0	13.85	.0549	.0549	96.7	6790.4	1.468E-03	3.951E+06
.648	19.59	19614.2	2778.6	3351.5	13.85	.0549	.0549	96.8	6792.9	1.467E-03	3.947E+06
.654	19.47	19623.2	2781.6	3354.1	13.85	.0549	.0549	96.9	6795.3	1.466E-03	3.944E+06
AVERAGE		19387.2	2710.9	3264.3	13.93	.0522	.0522	93.5	6717.9	1.455E-03	4.006E+06

CU-AXIAL THERMOCOUPLE SHAKEDOWN TEST 12/10/75-12/12/79

TIME	ALPHA	WTR 1333	CU-AXIAL THERMOCOUPLE SHAKEDOWN TEST	12/10/75-12/12/79	T1 TW	T1 QDOT	T2 TW	T2 QDOT	T3 TW	T3 QDOT	T4 TW	T4 QDOT	T5 TW	T5 QDOT
407	20.13	1.701	3.747	163.77	77.020	89.18	9.142	9.142	74.58	1.104	78.11	4.147	90.49	20.012
411	20.30	1.748	3.757	163.19	77.574	89.18	9.076	9.076	74.60	1.127	78.11	4.147	90.96	20.374
414	20.46	1.795	3.769	162.60	78.020	89.21	8.999	8.999	74.63	1.152	78.21	4.147	91.55	20.744
420	20.61	1.840	3.781	162.06	78.566	89.25	8.895	8.895	74.63	1.168	78.21	4.147	92.04	21.076
424	20.75	1.885	3.793	161.72	79.118	89.25	8.833	8.833	74.66	1.185	78.31	4.200	92.54	21.422
428	20.88	1.925	3.815	170.14	79.494	89.25	8.770	8.770	74.70	1.207	78.40	4.217	92.94	21.764
432	21.01	1.971	3.834	176.85	79.887	89.25	8.701	8.701	74.72	1.224	78.41	4.231	93.46	22.061
436	21.12	2.011	3.855	176.26	80.273	89.28	8.634	8.634	74.75	1.247	78.50	4.243	93.95	22.314
441	21.22	2.050	3.877	173.32	80.773	89.32	8.590	8.590	74.75	1.270	78.57	4.254	94.52	22.574
444	21.32	2.086	3.901	176.14	81.271	89.35	8.543	8.543	74.77	1.291	78.62	4.267	94.87	22.834
448	21.40	2.121	3.925	176.15	81.661	89.39	8.541	8.541	74.77	1.307	78.66	4.285	95.51	23.060
453	21.48	2.152	3.949	177.22	82.051	89.46	8.516	8.516	74.81	1.327	78.74	4.306	95.94	23.254
457	21.55	2.181	3.974	176.63	82.561	89.49	8.499	8.499	74.84	1.344	78.80	4.322	96.43	23.430
461	21.61	2.208	3.999	180.05	83.041	89.53	8.495	8.495	74.88	1.362	78.87	4.339	97.00	23.604
465	21.67	2.231	4.023	181.11	83.424	89.54	8.498	8.498	74.90	1.377	78.94	4.358	97.42	23.765
470	21.72	2.252	4.047	182.52	83.964	89.60	8.511	8.511	74.94	1.396	79.00	4.381	97.85	23.903
474	21.76	2.270	4.064	183.44	84.423	89.67	8.516	8.516	74.97	1.406	79.04	4.398	98.34	24.004
478	21.79	2.285	4.091	185.00	84.730	89.71	8.529	8.529	74.99	1.413	79.11	4.413	98.62	24.103
482	21.82	2.297	4.111	186.06	84.976	89.78	8.551	8.551	75.01	1.425	79.17	4.430	99.12	24.154
486	21.84	2.306	4.130	187.12	85.277	89.81	8.572	8.572	75.03	1.438	79.24	4.446	99.47	24.195
490	21.85	2.313	4.144	188.54	85.420	89.86	8.609	8.609	75.04	1.440	79.25	4.465	99.90	24.264
494	21.86	2.316	4.161	189.20	85.604	89.92	8.626	8.626	75.05	1.452	79.34	4.470	100.25	24.284
498	21.86	2.317	4.174	190.66	85.904	89.94	8.683	8.683	75.10	1.478	79.41	4.481	100.68	24.282
504	21.86	2.314	4.184	192.43	86.148	90.10	8.727	8.727	75.12	1.425	79.47	4.494	101.03	24.280
507	21.85	2.312	4.192	193.14	86.243	90.13	8.741	8.741	75.11	1.417	79.51	4.507	101.45	24.274
511	21.83	2.305	4.194	194.20	86.373	90.24	8.811	8.811	75.13	1.409	79.57	4.516	101.74	24.274
515	21.81	2.297	4.202	195.26	86.470	90.31	8.842	8.842	75.16	1.406	79.64	4.517	102.02	24.233
520	21.78	2.284	4.203	196.32	86.624	90.38	8.842	8.842	75.18	1.404	79.66	4.528	102.45	24.202
524	21.75	2.274	4.202	197.38	86.743	90.44	8.948	8.948	75.18	1.400	79.71	4.540	102.73	24.184
528	21.72	2.259	4.194	198.45	86.748	90.54	8.943	8.943	75.19	1.395	79.74	4.546	103.08	24.112
532	21.68	2.244	4.194	199.86	86.920	90.70	9.043	9.043	75.21	1.395	79.84	4.549	103.44	24.075
536	21.63	2.224	4.164	200.57	86.728	90.73	9.064	9.064	75.21	1.384	79.91	4.536	103.72	23.983
540	21.58	2.208	4.174	201.63	86.778	90.80	9.113	9.113	75.22	1.375	79.94	4.542	104.00	23.922
544	21.53	2.184	4.159	202.69	86.976	90.87	9.169	9.169	75.24	1.369	79.99	4.550	104.29	23.865
548	21.47	2.167	4.157	203.75	86.958	90.98	9.190	9.190	75.24	1.360	80.00	4.546	104.50	23.775
552	21.41	2.145	4.144	204.46	86.990	91.05	9.249	9.249	75.28	1.357	80.10	4.553	104.78	23.741
556	21.34	2.123	4.131	205.52	86.924	91.14	9.273	9.273	75.29	1.350	80.11	4.546	105.06	23.624
560	21.27	2.106	4.117	206.58	86.997	91.26	9.314	9.314	75.30	1.344	80.17	4.551	105.28	23.547
564	21.20	2.076	4.103	207.29	87.107	91.33	9.372	9.372	75.33	1.336	80.24	4.565	105.56	23.494
568	21.12	2.052	4.084	208.35	87.034	91.44	9.413	9.413	75.33	1.327	80.30	4.568	105.84	23.392
572	21.04	2.028	4.074	209.41	87.198	91.51	9.478	9.478	75.32	1.327	80.33	4.575	106.05	23.320
576	20.95	2.003	4.051	210.12	87.667	91.62	9.505	9.505	75.32	1.320	80.34	4.568	106.27	23.186
580	20.87	1.974	4.044	211.18	87.112	91.72	9.574	9.574	75.33	1.306	80.44	4.541	106.55	23.125
584	20.77	1.954	4.031	212.25	87.292	91.83	9.676	9.676	75.38	1.296	80.50	4.547	106.83	23.063
588	20.68	1.924	4.014	212.94	87.284	91.96	9.723	9.723	75.37	1.285	80.54	4.541	106.97	22.914
592	20.58	1.894	4.007	214.01	87.420	92.01	9.749	9.749	75.38	1.274	80.57	4.544	107.19	22.815
596	20.44	1.874	3.997	215.08	87.401	92.15	9.804	9.804	75.38	1.265	80.64	4.501	107.47	22.664
600	20.38	1.854	3.984	215.74	87.736	92.25	9.963	9.963	75.40	1.253	80.71	4.617	107.61	22.593
604	20.27	1.824	3.961	216.44	87.450	92.37	10.024	10.024	75.40	1.245	80.71	4.616	107.82	22.423
608	20.17	1.805	3.971	217.55	87.450	92.43	10.043	10.043	75.40	1.239	80.77	4.617	107.97	22.251
612	20.06	1.780	3.971	218.26	87.450	92.61	10.145	10.145	75.42	1.234	80.84	4.625	108.18	22.114
616	19.94	1.759	3.964	219.32	87.700	92.74	10.244	10.244	75.43	1.218	80.84	4.628	108.32	21.941
620	19.83	1.731	3.964	220.38	87.706	92.82	10.347	10.347	75.40	1.202	80.90	4.614	108.44	21.754
624	19.71	1.704	3.964	221.04	87.886	92.94	10.465	10.465	75.42	1.192	80.94	4.650	108.53	21.600
628	19.59	1.687	3.972	222.01	87.901	93.14	10.547	10.547	75.42	1.178	81.01	4.652	108.81	21.464
632	19.47	1.654	3.977	223.21	87.908	93.24	10.634	10.634	75.43	1.160	81.07	4.658	109.46	21.175

TIME	ALPHA	PTW 1333	CO-AXIAL THERMOCOUPLE SHARPENING TEST	12/10/79-12/12/79	TIME	TIME	TIME	TIME	TIME	
TIME	ALPHA	PTW 1333	CO-AXIAL THERMOCOUPLE SHARPENING TEST	12/10/79-12/12/79	TIME	TIME	TIME	TIME	TIME	
1.40	19.36	19633.4	2/63.6	3350.7	13.65	0.535	97.0	6749.9	1.406E-03	3.939E+06
1.41	19.41	19644.9	2/67.5	3359.2	13.74	0.540	97.1	6802.1	1.406E-03	3.937E+06
1.42	19.44	19657.0	2/67.4	3361.7	13.74	0.547	97.2	6804.3	1.406E-03	3.936E+06
1.43	18.54	19672.1	2/64.2	3364.1	13.74	0.547	97.3	6806.5	1.406E-03	3.936E+06
1.44	18.62	19687.8	2/61.0	3366.7	13.74	0.548	97.4	6808.7	1.406E-03	3.936E+06
1.45	18.69	19704.9	2/63.2	3369.2	13.74	0.549	97.4	6810.9	1.406E-03	3.937E+06
1.46	18.55	19723.4	2/64.9	3371.5	13.74	0.550	97.5	6813.3	1.406E-03	3.937E+06
1.47	18.41	19743.3	2/69.9	3374.6	13.74	0.551	97.6	6815.7	1.406E-03	3.938E+06
1.48	18.27	19764.4	2/79.0	3377.4	13.74	0.552	97.7	6818.2	1.406E-03	3.938E+06
1.49	18.13	19785.7	2/81.2	3380.4	13.74	0.553	97.8	6820.6	1.406E-03	3.938E+06
1.50	17.99	19810.1	2/83.5	3383.6	13.74	0.554	97.9	6823.0	1.406E-03	3.938E+06
1.51	17.84	19834.2	2/85.8	3386.8	13.74	0.555	98.0	6825.4	1.406E-03	3.938E+06
1.52	17.70	19859.1	2/88.4	3390.3	13.74	0.556	98.1	6827.8	1.406E-03	3.938E+06
1.53	17.55	19884.4	2/91.1	3393.9	13.74	0.557	98.2	6830.2	1.406E-03	3.938E+06
1.54	17.40	19909.9	2/93.6	3397.6	13.74	0.557	98.3	6832.6	1.406E-03	3.938E+06
1.55	17.25	19935.3	2/96.7	3401.5	13.74	0.558	98.4	6835.0	1.406E-03	3.938E+06
1.56	17.10	19960.4	2/99.7	3405.5	13.74	0.559	98.5	6837.4	1.406E-03	3.938E+06
1.57	16.95	19985.7	2/102.7	3409.6	13.74	0.559	98.6	6839.8	1.406E-03	3.938E+06
1.58	16.80	20010.0	2/105.8	3413.7	13.74	0.559	98.7	6842.2	1.406E-03	3.938E+06
1.59	16.64	20035.2	2/108.9	3417.9	13.74	0.560	98.8	6844.6	1.406E-03	3.938E+06
1.60	16.49	20060.3	2/112.0	3422.0	13.74	0.560	98.9	6847.0	1.406E-03	3.938E+06
1.61	16.33	20085.7	2/115.1	3426.0	13.74	0.560	99.0	6849.4	1.406E-03	3.938E+06
1.62	16.17	20110.0	2/118.2	3429.9	13.74	0.560	99.1	6851.8	1.406E-03	3.938E+06
1.63	16.01	20135.3	2/121.3	3433.6	13.74	0.560	99.2	6854.2	1.406E-03	3.938E+06
1.64	15.85	20160.4	2/124.4	3437.1	13.74	0.561	99.3	6856.6	1.406E-03	3.938E+06
1.65	15.69	20185.7	2/127.5	3440.4	13.74	0.561	99.4	6859.0	1.406E-03	3.938E+06
1.66	15.53	20210.0	2/130.6	3443.3	13.74	0.561	99.5	6861.4	1.406E-03	3.938E+06
1.67	15.37	20235.3	2/133.7	3446.8	13.74	0.561	99.6	6863.8	1.406E-03	3.938E+06
1.68	15.21	20260.4	2/136.8	3450.0	13.74	0.561	99.7	6866.2	1.406E-03	3.938E+06
1.69	15.05	20285.7	2/139.9	3453.1	13.74	0.561	99.8	6868.6	1.406E-03	3.938E+06
1.70	14.89	20310.0	2/143.0	3456.2	13.74	0.562	99.9	6871.0	1.406E-03	3.938E+06
1.71	14.72	20335.3	2/146.1	3459.4	13.74	0.562	100.0	6873.4	1.406E-03	3.938E+06
1.72	14.56	20360.4	2/149.2	3462.5	13.74	0.562	100.1	6875.8	1.406E-03	3.938E+06
1.73	14.39	20385.7	2/152.3	3465.6	13.74	0.562	100.2	6878.2	1.406E-03	3.938E+06
1.74	14.23	20410.0	2/155.4	3468.7	13.74	0.563	100.3	6880.6	1.406E-03	3.938E+06
1.75	14.06	20435.3	2/158.5	3471.8	13.74	0.563	100.4	6883.0	1.406E-03	3.938E+06
1.76	13.89	20460.4	2/161.6	3474.9	13.74	0.563	100.5	6885.4	1.406E-03	3.938E+06
1.77	13.72	20485.7	2/164.7	3478.0	13.74	0.564	100.6	6887.8	1.406E-03	3.938E+06
1.78	13.55	20510.0	2/167.8	3481.1	13.74	0.564	100.7	6890.2	1.406E-03	3.938E+06
1.79	13.38	20535.3	2/170.9	3484.2	13.74	0.564	100.8	6892.6	1.406E-03	3.938E+06
1.80	13.21	20560.4	2/174.0	3487.3	13.74	0.565	100.9	6895.0	1.406E-03	3.938E+06
1.81	13.04	20585.7	2/177.1	3490.4	13.74	0.565	101.0	6897.4	1.406E-03	3.938E+06
1.82	12.87	20610.0	2/180.2	3493.5	13.74	0.566	101.1	6899.8	1.406E-03	3.938E+06
1.83	12.70	20635.3	2/183.3	3496.6	13.74	0.566	101.2	6902.2	1.406E-03	3.938E+06
1.84	12.53	20660.4	2/186.4	3499.7	13.74	0.566	101.3	6904.6	1.406E-03	3.938E+06
1.85	12.36	20685.7	2/189.5	3502.8	13.74	0.567	101.4	6907.0	1.406E-03	3.938E+06
1.86	12.19	20710.0	2/192.6	3505.9	13.74	0.567	101.5	6909.4	1.406E-03	3.938E+06
1.87	12.02	20735.3	2/195.7	3509.0	13.74	0.567	101.6	6911.8	1.406E-03	3.938E+06
1.88	11.85	20760.4	2/198.8	3512.1	13.74	0.567	101.7	6914.2	1.406E-03	3.938E+06
1.89	11.68	20785.7	2/201.9	3515.2	13.74	0.568	101.8	6916.6	1.406E-03	3.938E+06
1.90	11.51	20810.0	2/205.0	3518.3	13.74	0.568	101.9	6919.0	1.406E-03	3.938E+06
1.91	11.34	20835.3	2/208.1	3521.4	13.74	0.568	102.0	6921.4	1.406E-03	3.938E+06
1.92	11.17	20860.4	2/211.2	3524.5	13.74	0.568	102.1	6923.8	1.406E-03	3.938E+06
1.93	11.00	20885.7	2/214.3	3527.6	13.74	0.568	102.2	6926.2	1.406E-03	3.938E+06
1.94	10.83	20910.0	2/217.4	3530.7	13.74	0.568	102.3	6928.6	1.406E-03	3.938E+06
1.95	10.66	20935.3	2/220.5	3533.8	13.74	0.568	102.4	6931.0	1.406E-03	3.938E+06
1.96	10.49	20960.4	2/223.6	3536.9	13.74	0.568	102.5	6933.4	1.406E-03	3.938E+06
1.97	10.32	20985.7	2/226.7	3540.0	13.74	0.568	102.6	6935.8	1.406E-03	3.938E+06
1.98	10.15	21010.0	2/229.8	3543.1	13.74	0.568	102.7	6938.2	1.406E-03	3.938E+06
1.99	9.98	21035.3	2/232.9	3546.2	13.74	0.568	102.8	6940.6	1.406E-03	3.938E+06
2.00	9.81	21060.4	2/236.0	3549.3	13.74	0.568	102.9	6943.0	1.406E-03	3.938E+06
2.01	9.64	21085.7	2/239.1	3552.4	13.74	0.568	103.0	6945.4	1.406E-03	3.938E+06
2.02	9.47	21110.0	2/242.2	3555.5	13.74	0.568	103.1	6947.8	1.406E-03	3.938E+06
2.03	9.30	21135.3	2/245.3	3558.6	13.74	0.568	103.2	6950.2	1.406E-03	3.938E+06
2.04	9.13	21160.4	2/248.4	3561.7	13.74	0.568	103.3	6952.6	1.406E-03	3.938E+06
2.05	8.96	21185.7	2/251.5	3564.8	13.74	0.568	103.4	6955.0	1.406E-03	3.938E+06
2.06	8.79	21210.0	2/254.6	3567.9	13.74	0.568	103.5	6957.4	1.406E-03	3.938E+06
2.07	8.62	21235.3	2/257.7	3571.0	13.74	0.568	103.6	6959.8	1.406E-03	3.938E+06
2.08	8.45	21260.4	2/260.8	3574.1	13.74	0.568	103.7	6962.2	1.406E-03	3.938E+06
2.09	8.28	21285.7	2/263.9	3577.2	13.74	0.568	103.8	6964.6	1.406E-03	3.938E+06
2.10	8.11	21310.0	2/267.0	3580.3	13.74	0.568	103.9	6967.0	1.406E-03	3.938E+06
2.11	7.94	21335.3	2/270.1	3583.4	13.74	0.568	104.0	6969.4	1.406E-03	3.938E+06
2.12	7.77	21360.4	2/273.2	3586.5	13.74	0.568	104.1	6971.8	1.406E-03	3.938E+06
2.13	7.60	21385.7	2/276.3	3589.6	13.74	0.568	104.2	6974.2	1.406E-03	3.938E+06
2.14	7.43	21410.0	2/279.4	3592.7	13.74	0.568	104.3	6976.6	1.406E-03	3.938E+06
2.15	7.26	21435.3	2/282.5	3595.8	13.74	0.568	104.4	6979.0	1.406E-03	3.938E+06
2.16	7.09	21460.4	2/285.6	3598.9	13.74	0.568	104.5	6981.4	1.406E-03	3.938E+06
2.17	6.92	21485.7	2/288.7	3602.0	13.74	0.568	104.6	6983.8	1.406E-03	3.938E+06
2.18	6.75	21510.0	2/291.8	3605.1	13.74	0.568	104.7	6986.2	1.406E-03	3.938E+06
2.19	6.58	21535.3	2/294.9	3608.2	13.74	0.568	104.8	6988.6	1.406E-03	3.938E+06
2.20	6.41	21560.4	2/298.0	3611.3	13.74	0.568	104.9	6991.0	1.406E-03	3.938E+06
2.21	6.24	21585.7	2/301.1	3614.4	13.74	0.568	105.0	6993.4	1.406E-03	3.938E+06
2.22	6.07	21610.0	2/304.2	3617.5	13.74	0.568	105.1	6995.8	1.406E-03	3.938E+06
2.23	5.90	21635.3	2/307.3	3620.6	13.74	0.568	105.2	6998.2	1.406E-03	3.938E+06
2.24	5.73	21660.4	2/310.4	3623.7	13.74	0.568	105.3	7000.6	1.406E-03	3.938E+06
2.25	5.56	21685.7	2/313.5	3626.8	13.74	0.568	105.4	7003.0	1.406E-03	3.938E+06
2.26	5.39	21710.0	2/316.6	3629.9	13.74	0.568	105.5	7005.4	1.406E-03	3.938E+06
2.27	5.22	21735.3	2/319.7	3633.0	13.74	0.568	105.6	7007.8	1.406E-03	3.938E+06
2.28	5.05	21760.4	2/322.8	3636.1	13.74	0.568	105.7	7010.2	1.406E-03	3.938E+06
2.29	4.88	21785.7	2/325.9	3639.2	13.74	0.568	105.8	7012.6	1.406E-03	3.938E+06
2.30	4.71	21810.0	2/329.0	3642.3	13.74	0.568	105.9	7015.0	1.406E-03	3.938E+06
2.31	4.54	21835.3	2/332.1	3645.4	13.74	0.568	106.0	7017.4	1.406E-03	3.938E+06
2.32	4.37	21860.4	2/335.2	3648.5	13.74	0.568	106.1	7019.8	1.406E-03	3.938E+06
2.33	4.20	21885.7	2/338.3	3651.6	13.74	0.568	106.2	7022.2	1.406E-03	3.938E+06
2.34	4.03	21910.0	2/341.4	3654.7	13.74					

GUN 494 WTR 1333 CO-AXIAL THERMOCOUPLE SHAKEDOWN TEST 12/10/79-12/12/79

TIME	ALPHA	G1 QDOT	G2 QDOT	T1 TW	T1 QDOT	T2 TW	T2 QDOT	T3 TW	T3 QDOT	T4 TW	T4 QDOT	T5 TW	T5 QDOT
441	14.34	1.635	3.983	223.57	87.835	93.32	10.753	75.44	1.157	81.07	4.670	108.96	21.007
444	14.21	1.611	3.991	225.28	87.883	93.49	10.865	75.44	1.144	81.14	4.643	109.10	20.820
444	19.09	1.587	4.000	225.34	88.107	93.63	10.982	75.45	1.140	81.14	4.704	109.24	20.637
452	14.95	1.564	4.011	226.40	87.418	93.78	11.040	75.45	1.133	81.24	4.704	109.38	20.365
457	14.82	1.540	4.022	227.11	87.429	93.88	11.172	75.45	1.131	81.24	4.723	109.38	20.225
461	14.69	1.517	4.035	228.17	87.836	94.06	11.282	75.44	1.121	81.33	4.734	109.45	20.034
466	14.55	1.494	4.049	228.87	87.913	94.24	11.380	75.45	1.114	81.41	4.750	109.52	19.814
466	14.41	1.472	4.064	229.58	87.764	94.41	11.487	75.46	1.111	81.44	4.764	109.66	19.588
473	14.27	1.444	4.079	230.29	87.758	94.55	11.611	75.45	1.102	81.44	4.775	109.73	19.402
477	14.13	1.427	4.094	231.35	87.867	94.70	11.734	75.45	1.091	81.54	4.788	109.81	19.212
482	17.99	1.406	4.110	232.06	87.880	94.87	11.844	75.49	1.081	81.60	4.804	109.81	18.997
484	17.84	1.385	4.125	232.77	87.855	95.01	11.969	75.50	1.081	81.64	4.820	109.95	18.799
490	17.70	1.364	4.141	233.47	87.823	95.16	12.102	75.49	1.079	81.67	4.836	109.95	18.597
494	17.55	1.343	4.156	234.18	87.445	95.33	12.204	75.47	1.073	81.74	4.838	109.95	18.348
494	17.40	1.324	4.170	235.24	87.498	95.51	12.336	75.49	1.072	81.80	4.855	110.02	18.161
497	17.25	1.305	4.184	235.60	87.834	95.69	12.469	75.49	1.074	81.87	4.881	110.09	17.965
507	17.10	1.286	4.197	236.66	87.741	95.86	12.603	75.48	1.071	81.87	4.889	110.09	17.777
511	16.95	1.264	4.204	237.37	87.706	96.04	12.734	75.47	1.067	81.94	4.893	110.09	17.524
511	16.80	1.252	4.220	238.07	87.729	96.22	12.863	75.50	1.067	82.00	4.900	110.09	17.211
515	16.64	1.236	4.230	238.78	87.748	96.43	13.025	75.51	1.069	82.07	4.912	110.16	16.964
523	16.49	1.221	4.235	239.49	87.416	96.61	13.149	75.51	1.072	82.04	4.929	110.09	16.738
527	16.33	1.205	4.245	240.55	87.710	96.78	13.268	75.50	1.075	82.14	4.922	110.09	16.451
531	16.17	1.193	4.251	241.26	87.889	97.03	13.469	75.54	1.086	82.27	4.940	110.09	16.262
534	16.01	1.181	4.254	241.97	87.894	97.24	13.582	75.55	1.090	82.27	4.935	110.02	15.964
540	15.85	1.171	4.257	242.67	87.733	97.42	13.730	75.54	1.090	82.37	4.941	109.95	15.724
544	15.69	1.161	4.254	243.38	87.797	97.63	13.891	75.52	1.111	82.31	4.950	109.95	15.514
548	15.53	1.153	4.257	244.09	87.404	97.84	14.007	75.57	1.118	82.31	4.945	109.88	15.247
552	15.37	1.146	4.255	244.80	87.428	98.02	14.130	75.57	1.125	82.44	4.944	109.88	15.008
556	15.21	1.140	4.252	245.50	87.338	98.23	14.269	75.57	1.134	82.45	4.945	109.81	14.785
560	15.05	1.134	4.247	246.21	87.283	98.41	14.414	75.59	1.145	82.51	4.947	109.73	14.573
564	14.88	1.133	4.241	246.92	87.187	98.68	14.547	75.60	1.154	82.54	4.948	109.73	14.344
568	14.72	1.131	4.234	247.63	86.403	98.87	14.687	75.62	1.162	82.67	4.939	109.66	14.103
572	14.55	1.131	4.226	247.98	86.746	99.08	14.799	75.62	1.175	82.64	4.942	109.52	13.823
577	14.39	1.132	4.217	248.04	86.419	99.30	14.967	75.67	1.189	82.64	4.950	109.24	13.574
581	14.22	1.135	4.207	248.40	86.456	99.51	15.077	75.64	1.194	82.74	4.941	109.45	13.384
585	14.05	1.134	4.197	249.75	86.419	99.72	15.236	75.67	1.215	82.74	4.947	109.45	13.101
590	13.88	1.144	4.187	250.46	86.330	99.93	15.396	75.67	1.229	82.81	4.949	109.31	12.895
594	13.72	1.151	4.176	251.17	86.195	100.14	15.555	75.67	1.238	82.82	4.949	109.24	12.680
598	13.55	1.154	4.167	251.47	86.090	100.39	15.721	75.71	1.255	82.97	4.943	109.17	12.474
602	13.38	1.164	4.154	252.23	86.007	100.64	15.880	75.74	1.277	82.97	4.945	109.17	12.290
606	13.21	1.166	4.143	253.24	85.446	100.89	16.041	75.72	1.296	82.97	4.934	109.03	12.094
610	13.04	1.167	4.133	253.64	85.406	101.13	16.211	75.74	1.315	83.00	4.935	109.44	11.907
614	12.87	1.168	4.123	254.35	85.459	101.38	16.386	75.77	1.339	83.04	4.930	109.49	11.737
618	12.70	1.170	4.114	255.06	85.429	101.63	16.561	75.80	1.360	83.17	4.921	109.41	11.567
622	12.53	1.173	4.104	255.41	85.454	101.88	16.742	75.79	1.383	83.17	4.913	109.67	11.407
626	12.36	1.175	4.094	256.12	85.407	102.13	16.918	75.81	1.411	83.17	4.908	109.53	11.247
630	12.19	1.177	4.084	256.83	85.203	102.41	17.096	75.86	1.436	83.27	4.904	109.53	11.087
634	12.02	1.179	4.074	257.14	84.984	102.66	17.272	75.89	1.456	83.27	4.892	109.44	10.927
638	11.85	1.181	4.064	257.85	84.787	102.90	17.444	75.89	1.481	83.27	4.874	109.32	10.761
642	11.68	1.183	4.054	258.24	84.593	103.14	17.615	75.91	1.511	83.37	4.862	109.25	10.591
646	11.51	1.184	4.044	258.95	84.422	103.47	17.787	75.96	1.537	83.37	4.852	109.25	10.420
650	11.34	1.186	4.034	259.30	84.271	103.77	17.974	75.94	1.563	83.47	4.843	109.18	10.250
654	11.17	1.187	4.024	260.01	84.033	104.04	18.168	76.01	1.588	83.47	4.840	109.11	10.079
658	11.00	1.188	4.014	260.37	83.800	104.25	18.361	76.02	1.617	83.47	4.823	107.49	9.908
662	10.83	1.189	4.004	260.72	83.717	104.57	18.550	76.00	1.645	83.47	4.804	107.49	9.737
666	10.67	1.190	4.004	261.07	83.624	104.85	18.745	76.04	1.673	83.47	4.781	107.42	9.566

DATA 49- CU-AXIAL THERMOCOUPLE SHARP-ROUN TEST 12/10/79-12/12/79

TIME	ALPHA	PO	TO	TOL	WACH	PINT	TIRF	UINF	RHOINF	MEINF
1.73	10.50	20214.7	2899.6	3470.6	13.70	.0566	100.4	6900.3	1.473E-03	3.878E+06
1.77	10.33	20214.8	2870.7	3472.3	13.70	.0566	100.6	6901.5	1.472E-03	3.875E+06
1.81	10.16	20212.5	2871.8	3473.6	13.70	.0566	100.6	6902.7	1.471E-03	3.873E+06
1.85	9.99	20202.0	2872.9	3474.9	13.70	.0568	100.7	6903.6	1.471E-03	3.870E+06
1.89	9.82	20201.0	2873.9	3475.1	13.70	.0568	100.7	6904.4	1.470E-03	3.867E+06
1.93	9.66	20193.0	2874.9	3477.3	13.70	.0568	100.8	6905.4	1.470E-03	3.864E+06
1.97	9.49	20184.4	2875.9	3478.3	13.79	.0568	100.8	6906.7	1.470E-03	3.862E+06
2.01	9.32	20174.5	2876.8	3479.3	13.79	.0567	100.9	6907.6	1.469E-03	3.859E+06
2.05	9.16	20164.4	2877.6	3480.2	13.79	.0567	101.0	6908.3	1.469E-03	3.856E+06
2.09	8.99	20154.0	2878.4	3481.1	13.79	.0567	101.0	6909.0	1.468E-03	3.854E+06
2.13	8.83	20145.4	2879.1	3481.9	13.78	.0569	101.1	6909.7	1.468E-03	3.852E+06
2.17	8.66	20137.3	2879.4	3482.6	13.78	.0567	101.1	6910.3	1.468E-03	3.850E+06
2.21	8.50	20130.0	2879.4	3483.3	13.78	.0570	101.2	6910.9	1.468E-03	3.849E+06
2.25	8.34	20125.0	2881.0	3483.9	13.78	.0570	101.2	6911.5	1.468E-03	3.848E+06
2.29	8.18	20120.2	2881.5	3484.6	13.78	.0570	101.2	6912.0	1.468E-03	3.847E+06
2.33	8.01	20120.7	2882.0	3485.1	13.78	.0570	101.3	6912.5	1.468E-03	3.846E+06
2.37	7.85	20121.0	2882.4	3485.7	13.78	.0571	101.3	6912.9	1.468E-03	3.846E+06
2.41	7.69	20123.0	2882.8	3486.2	13.78	.0571	101.3	6913.4	1.468E-03	3.846E+06
2.45	7.54	20125.4	2883.1	3486.6	13.77	.0571	101.3	6913.9	1.468E-03	3.846E+06
2.49	7.38	20131.0	2883.4	3487.0	13.77	.0571	101.3	6914.1	1.468E-03	3.846E+06
2.53	7.22	20136.6	2883.6	3487.4	13.78	.0571	101.3	6914.4	1.468E-03	3.846E+06
2.57	7.07	20142.7	2883.8	3487.7	13.78	.0571	101.3	6914.7	1.468E-03	3.847E+06
2.61	6.91	20144.0	2884.0	3488.0	13.78	.0571	101.3	6915.0	1.468E-03	3.847E+06
2.65	6.76	20155.3	2884.1	3488.2	13.78	.0571	101.3	6915.2	1.468E-03	3.847E+06
2.69	6.61	20161.1	2884.2	3488.4	13.78	.0571	101.3	6915.4	1.468E-03	3.847E+06
2.73	6.45	20166.3	2884.3	3488.6	13.78	.0571	101.3	6915.5	1.468E-03	3.847E+06
2.77	6.30	20170.5	2884.3	3488.7	13.78	.0570	101.3	6915.7	1.468E-03	3.847E+06
2.81	6.14	20173.0	2884.4	3488.8	13.78	.0570	101.3	6915.8	1.468E-03	3.846E+06
2.85	6.01	20175.4	2884.4	3488.9	13.78	.0570	101.3	6915.9	1.467E-03	3.845E+06
2.89	5.86	20175.9	2884.4	3488.9	13.79	.0569	101.2	6915.9	1.467E-03	3.844E+06
2.93	5.72	20175.0	2884.5	3489.0	13.79	.0569	101.2	6916.0	1.466E-03	3.843E+06
2.97	5.57	20172.7	2884.5	3489.0	13.79	.0569	101.2	6916.0	1.465E-03	3.841E+06
3.01	5.43	20169.0	2884.6	3489.0	13.79	.0568	101.2	6916.0	1.464E-03	3.840E+06
3.05	5.29	20164.0	2884.6	3489.0	13.79	.0568	101.2	6916.0	1.463E-03	3.838E+06
3.09	5.15	20157.8	2884.6	3488.9	13.79	.0567	101.2	6916.0	1.462E-03	3.836E+06
3.13	5.01	20150.5	2884.6	3488.6	13.79	.0567	101.1	6915.9	1.461E-03	3.834E+06
3.17	4.88	20142.1	2884.6	3488.7	13.79	.0566	101.1	6915.8	1.459E-03	3.832E+06
3.21	4.74	20132.8	2884.6	3488.5	13.79	.0566	101.1	6915.6	1.458E-03	3.829E+06
3.25	4.61	20122.5	2884.5	3488.2	13.79	.0565	101.1	6915.4	1.458E-03	3.826E+06
3.29	4.47	20111.5	2884.3	3487.9	13.79	.0565	101.1	6915.1	1.457E-03	3.824E+06
3.33	4.34	20099.0	2884.0	3487.4	13.79	.0565	101.1	6914.7	1.456E-03	3.822E+06
3.37	4.22	20086.9	2883.7	3486.8	13.79	.0564	101.1	6914.1	1.455E-03	3.821E+06
3.41	4.09	20073.0	2883.2	3486.0	13.79	.0564	101.0	6913.5	1.455E-03	3.819E+06
3.45	3.96	20059.5	2882.6	3485.1	13.79	.0563	101.0	6912.7	1.454E-03	3.818E+06
3.49	3.84	20044.7	2881.9	3484.0	13.79	.0563	101.0	6911.7	1.453E-03	3.816E+06
3.53	3.72	20029.2	2881.1	3482.8	13.79	.0563	101.0	6910.7	1.453E-03	3.815E+06
3.57	3.60	20013.2	2880.1	3481.4	13.79	.0562	100.9	6909.4	1.452E-03	3.814E+06
3.61	3.48	19996.6	2879.1	3479.9	13.79	.0562	100.9	6908.1	1.452E-03	3.814E+06
3.65	3.36	19979.5	2877.9	3478.2	13.79	.0562	100.9	6906.6	1.451E-03	3.813E+06
3.69	3.24	19962.2	2876.6	3476.4	13.79	.0561	100.8	6905.0	1.451E-03	3.813E+06
3.73	3.14	19944.0	2875.3	3474.4	13.79	.0561	100.8	6903.3	1.451E-03	3.813E+06
3.77	3.03	19927.0	2873.8	3472.5	13.79	.0560	100.7	6901.6	1.450E-03	3.813E+06
3.81	2.92	19909.5	2872.4	3470.4	13.79	.0560	100.7	6899.8	1.450E-03	3.812E+06
3.85	2.81	19892.3	2870.9	3468.4	13.79	.0559	100.6	6898.0	1.449E-03	3.812E+06
3.89	2.70	19875.6	2869.5	3466.3	13.79	.0559	100.6	6896.2	1.449E-03	3.812E+06
3.93	2.60	19858.5	2868.0	3464.3	13.79	.0558	100.5	6894.4	1.448E-03	3.812E+06
3.97	2.50	19841.5	2866.4	3462.0	13.79	.0557	101.0	6910.4	1.463E-03	3.839E+06
3.99	2.40	19824.5	2864.8	3460.0	13.79	.0556	100.5	6894.4	1.448E-03	3.812E+06

AVERAGE

49-- WTH 1333 CU-AXIAL THE PHOUCOUPLE SHARPCROWN TEST 12/10/79-12/12/79

TIME	ALPHA	G1	QDOT	G2	QDOT	T1	TW	T1	QDOT	T2	TW	T2	QDOT	T3	TW	T3	QDOT	T4	TW	T4	QDOT	T5	TW	T5	QDOT
0.74	10.50		1.501	4.0924	261.78	83.567	105.10	18.810	17.02	105.10	18.810	17.02	17.02	83.51	107.61	17.02	83.51	107.61	17.02	83.51	107.61	17.02	83.51	107.61	17.02
0.77	10.33		1.522	4.105	262.13	83.196	105.35	18.936	17.31	105.35	18.936	17.31	17.31	83.54	107.54	17.31	83.54	107.54	17.31	83.54	107.54	17.31	83.54	107.54	17.31
0.81	9.99		1.555	4.112	262.44	83.132	105.66	19.307	17.62	105.66	19.307	17.62	17.62	83.60	107.47	17.62	83.60	107.47	17.62	83.60	107.47	17.62	83.60	107.47	17.62
0.85	9.82		1.583	4.120	263.55	82.743	105.96	19.434	17.82	105.96	19.434	17.82	17.82	83.66	107.26	17.82	83.66	107.26	17.82	83.66	107.26	17.82	83.66	107.26	17.82
0.89	9.66		1.611	4.129	263.90	82.999	106.23	19.587	18.03	106.23	19.587	18.03	18.03	83.66	107.26	18.03	83.66	107.26	18.03	83.66	107.26	18.03	83.66	107.26	18.03
0.94	9.49		1.640	4.134	264.61	82.785	106.51	19.770	18.24	106.51	19.770	18.24	18.24	83.64	107.12	18.24	83.64	107.12	18.24	83.64	107.12	18.24	83.64	107.12	18.24
0.99	9.32		1.669	4.147	264.97	82.732	106.83	19.933	18.45	106.83	19.933	18.45	18.45	83.77	106.97	18.45	83.77	106.97	18.45	83.77	106.97	18.45	83.77	106.97	18.45
1.04	9.16		1.699	4.156	265.32	82.443	107.11	20.126	18.67	107.11	20.126	18.67	18.67	83.84	106.83	18.67	83.84	106.83	18.67	83.84	106.83	18.67	83.84	106.83	18.67
1.09	8.99		1.720	4.164	265.03	82.378	107.40	20.257	18.88	107.40	20.257	18.88	18.88	83.84	106.69	18.88	83.84	106.69	18.88	83.84	106.69	18.88	83.84	106.69	18.88
1.14	8.83		1.749	4.173	265.03	82.250	107.68	20.443	19.06	107.68	20.443	19.06	19.06	83.95	106.62	19.06	83.95	106.62	19.06	83.95	106.62	19.06	83.95	106.62	19.06
1.19	8.66		1.820	4.187	265.73	82.224	108.00	20.611	19.24	108.00	20.611	19.24	19.24	84.00	106.55	19.24	84.00	106.55	19.24	84.00	106.55	19.24	84.00	106.55	19.24
1.24	8.50		1.852	4.193	265.80	82.253	108.27	20.767	19.42	108.27	20.767	19.42	19.42	84.00	106.41	19.42	84.00	106.41	19.42	84.00	106.41	19.42	84.00	106.41	19.42
1.29	8.34		1.883	4.197	266.15	82.226	108.55	20.950	19.60	108.55	20.950	19.60	19.60	84.07	106.27	19.60	84.07	106.27	19.60	84.07	106.27	19.60	84.07	106.27	19.60
1.34	8.18		1.915	4.201	266.50	82.245	108.85	21.055	19.78	108.85	21.055	19.78	19.78	84.11	106.20	19.78	84.11	106.20	19.78	84.11	106.20	19.78	84.11	106.20	19.78
1.39	8.01		1.947	4.202	266.85	82.246	109.20	21.216	19.96	109.20	21.216	19.96	19.96	84.17	106.05	19.96	84.17	106.05	19.96	84.17	106.05	19.96	84.17	106.05	19.96
1.44	7.85		1.974	4.202	267.57	82.492	109.50	21.359	20.14	109.50	21.359	20.14	20.14	84.17	105.91	20.14	84.17	105.91	20.14	84.17	105.91	20.14	84.17	105.91	20.14
1.49	7.69		2.012	4.201	270.27	82.462	110.12	21.494	20.32	110.12	21.494	20.32	20.32	84.17	105.70	20.32	84.17	105.70	20.32	84.17	105.70	20.32	84.17	105.70	20.32
1.54	7.54		2.045	4.197	271.33	82.371	110.44	21.628	20.50	110.44	21.628	20.50	20.50	84.31	105.70	20.50	84.31	105.70	20.50	84.31	105.70	20.50	84.31	105.70	20.50
1.59	7.38		2.07	4.192	272.04	81.090	110.76	21.715	20.68	110.76	21.715	20.68	20.68	84.31	105.63	20.68	84.31	105.63	20.68	84.31	105.63	20.68	84.31	105.63	20.68
1.64	7.22		2.112	4.184	272.40	81.010	111.01	21.883	20.85	111.01	21.883	20.85	20.85	84.31	105.49	20.85	84.31	105.49	20.85	84.31	105.49	20.85	84.31	105.49	20.85
1.69	7.07		2.140	4.175	273.75	81.367	111.24	21.977	21.03	111.24	21.977	21.03	21.03	84.47	105.35	21.03	84.47	105.35	21.03	84.47	105.35	21.03	84.47	105.35	21.03
1.74	6.91		2.160	4.168	273.10	80.65	111.61	22.064	21.20	111.61	22.064	21.20	21.20	84.50	105.28	21.20	84.50	105.28	21.20	84.50	105.28	21.20	84.50	105.28	21.20
1.79	6.76		2.210	4.150	273.40	80.671	111.85	22.188	21.38	111.85	22.188	21.38	21.38	84.50	105.13	21.38	84.50	105.13	21.38	84.50	105.13	21.38	84.50	105.13	21.38
1.84	6.61		2.244	4.135	273.46	79.427	112.14	22.278	21.56	112.14	22.278	21.56	21.56	84.50	104.99	21.56	84.50	104.99	21.56	84.50	104.99	21.56	84.50	104.99	21.56
1.89	6.45		2.284	4.117	273.81	79.430	112.39	22.424	21.74	112.39	22.424	21.74	21.74	84.50	104.85	21.74	84.50	104.85	21.74	84.50	104.85	21.74	84.50	104.85	21.74
1.94	6.30		2.314	4.099	273.81	78.793	112.74	22.538	21.92	112.74	22.538	21.92	21.92	84.50	104.71	21.92	84.50	104.71	21.92	84.50	104.71	21.92	84.50	104.71	21.92
1.99	6.16		2.355	4.079	274.16	78.037	113.02	22.653	22.10	113.02	22.653	22.10	22.10	84.50	104.57	22.10	84.50	104.57	22.10	84.50	104.57	22.10	84.50	104.57	22.10
2.04	6.01		2.390	4.057	274.16	77.571	113.31	22.828	22.28	113.31	22.828	22.28	22.28	84.50	104.43	22.28	84.50	104.43	22.28	84.50	104.43	22.28	84.50	104.43	22.28
2.09	5.86		2.424	4.034	274.52	76.551	113.59	23.044	22.46	113.59	23.044	22.46	22.46	84.50	104.29	22.46	84.50	104.29	22.46	84.50	104.29	22.46	84.50	104.29	22.46
2.14	5.72		2.463	4.014	274.52	75.567	113.87	23.158	22.64	113.87	23.158	22.64	22.64	84.50	104.15	22.64	84.50	104.15	22.64	84.50	104.15	22.64	84.50	104.15	22.64
2.19	5.57		2.494	3.994	274.52	76.233	114.14	23.387	22.82	114.14	23.387	22.82	22.82	84.50	104.00	22.82	84.50	104.00	22.82	84.50	104.00	22.82	84.50	104.00	22.82
2.24	5.43		2.536	3.974	274.52	75.704	114.51	23.588	23.00	114.51	23.588	23.00	23.00	84.50	103.86	23.00	84.50	103.86	23.00	84.50	103.86	23.00	84.50	103.86	23.00
2.29	5.29		2.577	3.951	274.52	75.495	114.83	23.838	23.18	114.83	23.838	23.18	23.18	84.50	103.72	23.18	84.50	103.72	23.18	84.50	103.72	23.18	84.50	103.72	23.18
2.34	5.15		2.604	3.904	275.04	75.267	115.22	24.044	23.36	115.22	24.044	23.36	23.36	84.50	103.58	23.36	84.50	103.58	23.36	84.50	103.58	23.36	84.50	103.58	23.36
2.39	5.01		2.647	3.877	275.04	75.156	115.54	24.275	23.54	115.54	24.275	23.54	23.54	84.50	103.44	23.54	84.50	103.44	23.54	84.50	103.44	23.54	84.50	103.44	23.54
2.44	4.87		2.684	3.850	275.04	74.761	115.89	24.444	23.72	115.89	24.444	23.72	23.72	84.50	103.30	23.72	84.50	103.30	23.72	84.50	103.30	23.72	84.50	103.30	23.72
2.49	4.74		2.721	3.823	275.04	74.543	116.24	24.653	23.90	116.24	24.653	23.90	23.90	84.50	103.16	23.90	84.50	103.16	23.90	84.50	103.16	23.90	84.50	103.16	23.90
2.54	4.61		2.760	3.797	275.04	74.580	116.67	24.878	24.08	116.67	24.878	24.08	24.08	84.50	103.02	24.08	84.50	103.02	24.08	84.50	103.02	24.08	84.50	103.02	24.08
2.59	4.48		2.794	3.771	275.04	74.576	117.09	25.032	24.26	117.09	25.032	24.26	24.26	84.50	102.88	24.26	84.50	102.88	24.26	84.50	102.88	24.26	84.50	102.88	24.26
2.64	4.35		2.833	3.746	275.04	74.568	117.41	25.146	24.44	117.41	25.146	24.44	24.44	84.50	102.74	24.44	84.50	102.74	24.44	84.50	102.74	24.44	84.50	102.74	24.44
2.69	4.22		2.870	3.722	275.04	74.563	117.73	25.322	24.62	117.73	25.322	24.62	24.62	84.50	102.60	24.62	84.50	102.60	24.62	84.50	102.60	24.62	84.50	102.60	24.62
2.74	4.09		2.904	3.696	275.04	74.558	118.11	25.430	24.80	118.11	25.430	24.80	24.80	84.50	102.46	24.80	84.50	102.46	24.80	84.50	102.46	24.80	84.50	102.46	24.80
2.79	3.96		2.945	3.670	275.04	74.553	118.47	25.579	24.98	118.47	25.579	24.98	24.98	84.50	102.32	24.98	84.50	102.32	24.98	84.50	102.32	24.98	84.50	102.32	24.98
2.84	3.83		2.981	3.644	275.04	74.548	118.79	25.687	25.16	118.79	25.687	25.16	25.16	84.50	102.18	25.16	84.50	102.18	25.16	84.50	102.18	25.16	84.50	102.18	25.16
2.89	3.70		3.011	3.618	275.04	74.543	119.04	25.849	25.34	119.04	25.849	25.34	25.34	84.50	102.04	25.34	84.50	102.04	25.34	84.50	102.04	25.34	84.50	102.04	25.34
2.94	3.57		3.054	3.592	275.04																				

CU-AXIAL THERMOCOUPLE SHAKE-DOWN TEST 12/10/79-12/11/79

TIME	ALPHA	WTP 1333	CU	TU	TU1	MACH	P1NF	TINF	UINF	HPOINF	HEINF
1.104	2.50	19444.2	2666.6	3462.4	13.79	.0550	100.4	6092.7	1.4448E-03	3.812E+06	
1.110	2.40	19424.9	2667.3	3460.6	13.79	.0557	100.4	6091.1	1.4448E-03	3.812E+06	
1.114	2.30	19416.6	2664.1	3458.6	13.79	.0557	100.3	6089.6	1.4447E-03	3.812E+06	
1.118	2.20	19404.3	2662.9	3457.2	13.79	.0557	100.3	6088.2	1.4447E-03	3.812E+06	
1.122	2.11	19794.1	2661.8	3455.7	13.40	.0556	100.2	6086.9	1.4446E-03	3.811E+06	
1.124	2.02	19781.0	2660.8	3454.4	13.40	.0556	100.2	6085.7	1.4446E-03	3.811E+06	
1.130	1.93	19773.8	2659.9	3453.2	13.40	.0555	100.2	6084.7	1.4445E-03	3.811E+06	
1.134	1.84	19767.6	2659.1	3452.0	13.40	.0555	100.1	6083.7	1.4445E-03	3.811E+06	
1.138	1.74	19754.0	2658.4	3451.0	13.40	.0555	100.1	6082.7	1.4445E-03	3.811E+06	
1.143	1.67	19751.0	2657.6	3450.0	13.40	.0554	100.1	6081.9	1.4444E-03	3.811E+06	
1.147	1.59	19744.4	2656.9	3448.9	13.40	.0554	100.0	6081.0	1.4444E-03	3.811E+06	
1.151	1.51	19734.0	2656.1	3447.9	13.40	.0554	100.0	6080.1	1.4444E-03	3.811E+06	
1.154	1.43	19731.6	2655.2	3446.6	13.40	.0554	100.0	6079.1	1.4444E-03	3.812E+06	
1.160	1.35	19724.1	2654.3	3445.5	13.40	.0553	99.9	6077.9	1.4444E-03	3.813E+06	
1.164	1.27	19714.3	2653.1	3443.9	13.40	.0553	99.9	6076.4	1.4444E-03	3.813E+06	
1.168	1.20	19711.1	2651.7	3442.1	13.40	.0553	99.8	6075.0	1.4444E-03	3.813E+06	
1.172	1.13	19704.4	2650.1	3439.9	13.40	.0552	99.7	6073.1	1.4444E-03	3.816E+06	
1.177	1.04	19697.3	2648.1	3437.4	13.40	.0552	99.7	6070.8	1.4444E-03	3.818E+06	
1.180	.94	19686.7	2645.7	3434.3	13.40	.0551	99.5	6068.1	1.4444E-03	3.821E+06	
1.184	.84	19677.6	2642.8	3430.6	13.40	.0550	99.4	6065.0	1.4443E-03	3.823E+06	
1.189	.74	19668.1	2639.5	3426.3	13.40	.0549	99.2	6061.2	1.4443E-03	3.827E+06	
1.194	.64	19658.4	2635.6	3421.4	13.40	.0548	99.1	6056.9	1.4443E-03	3.831E+06	
1.197	.54	19648.4	2631.2	3415.7	13.40	.0547	98.8	6052.0	1.4442E-03	3.836E+06	
1.201	.47	19636.3	2626.1	3409.3	13.40	.0545	98.6	6046.4	1.4442E-03	3.841E+06	
1.206	.41	19620.1	2620.4	3402.1	13.40	.0543	98.3	6040.1	1.4442E-03	3.847E+06	
1.210	.35	19610.0	2614.0	3394.1	13.40	.0542	98.0	6033.1	1.4441E-03	3.854E+06	
1.214	.29	19597.0	2606.9	3385.2	13.40	.0539	97.6	6025.4	1.4441E-03	3.863E+06	
1.218	.24	19584.1	2599.2	3375.5	13.40	.0537	97.2	6016.9	1.4440E-03	3.872E+06	
1.222	.18	19574.6	2591.1	3365.1	13.40	.0535	96.8	6007.7	1.4440E-03	3.883E+06	
1.226	.14	19564.0	2581.7	3353.8	13.40	.0530	96.4	6000.0	1.4440E-03	3.895E+06	
1.230	.10	19554.3	2571.1	3341.7	13.40	.0527	95.9	6000.0	1.4440E-03	3.908E+06	
1.234	.06	19544.5	2559.5	3329.0	13.40	.0525	95.4	6000.0	1.4440E-03	3.923E+06	
1.238	.02	19534.6	2547.2	3315.6	13.40	.0523	94.9	6000.0	1.4440E-03	3.940E+06	
1.242	.00	19524.3	2534.7	3301.5	13.40	.0521	94.3	6000.0	1.4440E-03	3.958E+06	
1.246	.00	19514.7	2521.1	3287.1	13.40	.0519	93.9	6000.0	1.4440E-03	3.978E+06	
1.250	.00	19504.6	2507.2	3271.7	13.40	.0518	93.4	6000.0	1.4440E-03	3.999E+06	
1.254	.00	19494.0	2493.2	3256.2	13.40	.0516	92.8	6000.0	1.4440E-03	4.021E+06	
1.258	.00	19483.9	2479.3	3240.3	13.40	.0515	92.3	6000.0	1.4440E-03	4.045E+06	
1.262	.00	19473.8	2465.0	3224.1	13.40	.0513	91.8	6000.0	1.4440E-03	4.071E+06	
1.266	.00	19463.7	2450.6	3207.8	13.40	.0511	91.3	6000.0	1.4440E-03	4.106E+06	
1.270	.00	19453.6	2436.1	3191.2	14.00	.0514	90.8	6000.0	1.4440E-03	4.136E+06	
1.274	.00	19443.5	2421.7	3174.6	14.00	.0514	90.4	6000.0	1.4440E-03	4.167E+06	
1.278	.00	19433.4	2407.3	3158.0	14.00	.0514	89.9	6000.0	1.4440E-03	4.200E+06	
1.282	.00	19423.3	2392.8	3141.4	14.00	.0514	89.5	6000.0	1.4440E-03	4.233E+06	
1.286	.00	19413.2	2378.4	3124.9	14.00	.0514	89.0	6000.0	1.4440E-03	4.267E+06	
1.290	.00	19403.1	2363.9	3108.4	14.00	.0514	88.6	6000.0	1.4440E-03	4.301E+06	
1.294	.00	19393.0	2349.5	3092.0	14.00	.0514	88.1	6000.0	1.4440E-03	4.335E+06	
1.298	.00	19382.9	2335.0	3075.5	13.40	.0514	87.7	6000.0	1.4440E-03	4.369E+06	
1.302	.00	19372.8	2320.5	3059.0	13.40	.0514	87.2	6000.0	1.4440E-03	4.403E+06	
1.306	.00	19362.7	2306.0	3042.5	13.40	.0514	86.7	6000.0	1.4440E-03	4.437E+06	
1.310	.00	19352.6	2291.5	3026.0	13.40	.0514	86.2	6000.0	1.4440E-03	4.471E+06	
1.314	.00	19342.5	2277.0	3009.5	13.40	.0514	85.7	6000.0	1.4440E-03	4.505E+06	
1.318	.00	19332.4	2262.5	2993.0	13.40	.0514	85.2	6000.0	1.4440E-03	4.539E+06	
1.322	.00	19322.3	2248.0	2976.5	13.40	.0514	84.7	6000.0	1.4440E-03	4.573E+06	
1.326	.00	19312.2	2233.5	2960.0	13.40	.0514	84.2	6000.0	1.4440E-03	4.607E+06	
1.330	.00	19302.1	2219.0	2943.5	13.40	.0514	83.7	6000.0	1.4440E-03	4.641E+06	
1.334	.00	19292.0	2204.5	2927.0	13.40	.0514	83.2	6000.0	1.4440E-03	4.675E+06	
1.338	.00	19281.9	2190.0	2910.5	13.40	.0514	82.7	6000.0	1.4440E-03	4.709E+06	
1.342	.00	19271.8	2175.5	2894.0	13.40	.0514	82.2	6000.0	1.4440E-03	4.743E+06	
1.346	.00	19261.7	2161.0	2877.5	13.40	.0514	81.7	6000.0	1.4440E-03	4.777E+06	
1.350	.00	19251.6	2146.5	2861.0	13.40	.0514	81.2	6000.0	1.4440E-03	4.811E+06	
1.354	.00	19241.5	2132.0	2844.5	13.40	.0514	80.7	6000.0	1.4440E-03	4.845E+06	
1.358	.00	19231.4	2117.5	2828.0	13.40	.0514	80.2	6000.0	1.4440E-03	4.879E+06	
1.362	.00	19221.3	2103.0	2811.5	13.40	.0514	79.7	6000.0	1.4440E-03	4.913E+06	
1.366	.00	19211.2	2088.5	2795.0	13.40	.0514	79.2	6000.0	1.4440E-03	4.947E+06	
1.370	.00	19201.1	2074.0	2778.5	13.40	.0514	78.7	6000.0	1.4440E-03	4.981E+06	
1.374	.00	19191.0	2059.5	2762.0	13.40	.0514	78.2	6000.0	1.4440E-03	5.015E+06	
1.378	.00	19180.9	2045.0	2745.5	13.40	.0514	77.7	6000.0	1.4440E-03	5.049E+06	
1.382	.00	19170.8	2030.5	2729.0	13.40	.0514	77.2	6000.0	1.4440E-03	5.083E+06	
1.386	.00	19160.7	2016.0	2712.5	13.40	.0514	76.7	6000.0	1.4440E-03	5.117E+06	
1.390	.00	19150.6	2001.5	2696.0	13.40	.0514	76.2	6000.0	1.4440E-03	5.151E+06	
1.394	.00	19140.5	1987.0	2679.5	13.40	.0514	75.7	6000.0	1.4440E-03	5.185E+06	
1.398	.00	19130.4	1972.5	2663.0	13.40	.0514	75.2	6000.0	1.4440E-03	5.219E+06	
1.402	.00	19120.3	1958.0	2646.5	13.40	.0514	74.7	6000.0	1.4440E-03	5.253E+06	
1.406	.00	19110.2	1943.5	2630.0	13.40	.0514	74.2	6000.0	1.4440E-03	5.287E+06	
1.410	.00	19100.1	1929.0	2613.5	13.40	.0514	73.7	6000.0	1.4440E-03	5.321E+06	
1.414	.00	19090.0	1914.5	2597.0	13.40	.0514	73.2	6000.0	1.4440E-03	5.355E+06	
1.418	.00	19080.0	1900.0	2580.5	13.40	.0514	72.7	6000.0	1.4440E-03	5.389E+06	
1.422	.00	19070.0	1885.5	2564.0	13.40	.0514	72.2	6000.0	1.4440E-03	5.423E+06	
1.426	.00	19060.0	1871.0	2547.5	13.40	.0514	71.7	6000.0	1.4440E-03	5.457E+06	
1.430	.00	19050.0	1856.5	2531.0	13.40	.0514	71.2	6000.0	1.4440E-03	5.491E+06	
1.434	.00	19040.0	1842.0	2514.5	13.40	.0514	70.7	6000.0	1.4440E-03	5.525E+06	
1.438	.00	19030.0	1827.5	2498.0	13.40	.0514	70.2	6000.0	1.4440E-03	5.559E+06	
1.442	.00	19020.0	1813.0	2481.5	13.40	.0514	69.7	6000.0	1.4440E-03	5.593E+06	
1.446	.00	19010.0	1798.5	2465.0	13.40	.0514	69.2	6000.0	1.4440E-03	5.627E+06	
1.450	.00	19000.0	1784.0	2448.5	13.40	.0514	68.7	6000.0	1.4440E-03	5.661E+06	
1.454	.00	19000.0	1769.5	2432.0	13.40	.0514	68.2	6000.0	1.4440E-03	5.695E+06	
1.458	.00	19000.0	1755.0	2415.5	13.40	.0514	67.7	6000.0	1.4440E-03	5.729E+06	
1.462	.00	19000.0	1740.5	2399.0	13.40	.0514	67.2	6000.0	1.4440E-03	5.763E+06	
1.466	.00	19000.0	1726.0	2382.5	13.40	.0514	66.7	6000.0	1.4440E-03	5.797E+06	
1.470	.00	19000.0	1711.5	2366.0	13.40	.0514	66.2	6000.0	1.4440E-03	5.831E+06	
1.474	.00	19000.0	1697.0	2349.5	13.40	.0514	65.7	6000.0	1.4440E-03	5.865E+06	
1.478	.00	19000.0	1682.5	2333.0	13.40	.0514	65.2	6000.0	1.4440E-03	5.899E+06	
1.482	.00	19000.0	1668.0	2316.5	13.40	.0514	64.7	6000.0	1.4440E-03	5.933E+06	
1.486	.00	19000.0	1653.5	2300.0	13.40	.0514	64.2	6000.0	1.4440E-03	5.967E+06	
1.490	.00	19000.0	1639.0	2283.5	13.40	.0514	63.7	6000.0	1.4440E-03	6.001E+06	
1.494	.00	19000.0	1624.5	2267.0	13.40	.0514	63.2	6000.0	1.4440E-03	6.035E+06	
1.498	.00	19000.0	1610.0	2250.5	13.40	.0514	62.7	60			

PIN	494	WTH 1333	CO-AXIAL THERMOCOUPLE SHAFECOMM TEST		12/10/79-12/12/79											
			61	Q00T	62	Q00T	T1	T2	T1	T2	T1	T2	T1	T2	T3	T4
1.100	2.50	3.384	3.551	3.551	3.551	3.551	71.536	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491
1.110	2.40	3.412	3.552	3.552	3.552	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.114	2.30	3.440	3.553	3.553	3.553	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.114	2.20	3.466	3.554	3.554	3.554	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.122	2.11	3.491	3.555	3.555	3.555	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.126	2.02	3.515	3.556	3.556	3.556	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.136	1.93	3.538	3.557	3.557	3.557	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.135	1.84	3.559	3.557	3.557	3.557	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.133	1.75	3.574	3.557	3.557	3.557	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.143	1.67	3.594	3.557	3.557	3.557	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.147	1.59	3.615	3.557	3.557	3.557	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.151	1.51	3.631	3.557	3.557	3.557	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.155	1.43	3.656	3.557	3.557	3.557	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.160	1.35	3.679	3.557	3.557	3.557	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.164	1.27	3.671	3.556	3.556	3.556	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.164	1.20	3.641	3.564	3.564	3.564	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.172	1.13	3.690	3.562	3.562	3.562	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.174	1.06	3.694	3.574	3.574	3.574	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.180	.99	3.704	3.573	3.573	3.573	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.184	.86	3.713	3.566	3.566	3.566	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.184	.86	3.713	3.566	3.566	3.566	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.193	.79	3.715	3.566	3.566	3.566	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.197	.73	3.718	3.536	3.536	3.536	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.201	.67	3.714	3.524	3.524	3.524	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.205	.61	3.717	3.509	3.509	3.509	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.205	.55	3.715	3.494	3.494	3.494	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.214	.50	3.712	3.474	3.474	3.474	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.214	.44	3.704	3.459	3.459	3.459	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.222	.39	3.704	3.438	3.438	3.438	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.222	.34	3.694	3.418	3.418	3.418	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.230	.28	3.691	3.396	3.396	3.396	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.234	.23	3.684	3.373	3.373	3.373	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.234	.18	3.674	3.350	3.350	3.350	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.243	.13	3.667	3.327	3.327	3.327	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.247	.09	3.657	3.301	3.301	3.301	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.251	.04	3.644	3.274	3.274	3.274	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.254	-.01	3.632	3.250	3.250	3.250	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.254	-.06	3.623	3.224	3.224	3.224	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.261	-.10	3.611	3.197	3.197	3.197	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.261	-.15	3.594	3.171	3.171	3.171	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.272	-.20	3.584	3.144	3.144	3.144	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.274	-.24	3.570	3.114	3.114	3.114	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.280	-.29	3.555	3.094	3.094	3.094	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.284	-.34	3.540	3.067	3.067	3.067	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.284	-.39	3.524	3.042	3.042	3.042	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.284	-.44	3.507	3.017	3.017	3.017	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491
1.291	-.48	3.491	2.992	2.992	2.992	71.537	122.15	25.993	78.74	3.683	85.14	102.23	15.001	15.001	4.491	4.491

TIME	ALPHA	U1 ST	U2 ST	STANTON NUMBER	CO-AXIAL INTERMCOUPLE	SHAREDOW	TEST	12/10/74-12/17/74
065	1.55	1.24E-04	4.952E-04		1.120E-02	1.397E-03	1.360E-04	1.504E-04
066	1.41	1.793E-04	4.959E-04		1.122E-02	1.407E-03	1.354E-04	1.511E-04
067	1.42	1.762E-04	4.967E-04		1.119E-02	1.420E-03	1.340E-04	1.516E-04
068	1.43	1.732E-04	4.974E-04		1.119E-02	1.433E-03	1.334E-04	1.520E-04
069	1.44	1.702E-04	4.984E-04		1.117E-02	1.444E-03	1.321E-04	1.524E-04
070	1.45	1.673E-04	4.993E-04		1.114E-02	1.455E-03	1.308E-04	1.528E-04
071	1.46	1.644E-04	5.002E-04		1.112E-02	1.466E-03	1.301E-04	1.532E-04
072	1.47	1.617E-04	5.010E-04		1.110E-02	1.477E-03	1.291E-04	1.535E-04
073	1.48	1.590E-04	5.014E-04		1.107E-02	1.488E-03	1.287E-04	1.538E-04
074	1.49	1.564E-04	5.027E-04		1.107E-02	1.507E-03	1.288E-04	1.541E-04
075	1.50	1.540E-04	5.034E-04		1.104E-02	1.518E-03	1.282E-04	1.544E-04
076	1.51	1.516E-04	5.041E-04		1.102E-02	1.531E-03	1.276E-04	1.547E-04
077	1.52	1.494E-04	5.047E-04		1.101E-02	1.544E-03	1.273E-04	1.550E-04
078	1.53	1.473E-04	5.052E-04		1.100E-02	1.562E-03	1.274E-04	1.553E-04
079	1.54	1.453E-04	5.056E-04		1.101E-02	1.580E-03	1.277E-04	1.556E-04
080	1.55	1.432E-04	5.059E-04		1.099E-02	1.592E-03	1.276E-04	1.559E-04
081	1.56	1.412E-04	5.061E-04		1.097E-02	1.611E-03	1.279E-04	1.562E-04
082	1.57	1.392E-04	5.061E-04		1.095E-02	1.623E-03	1.274E-04	1.565E-04
083	1.58	1.372E-04	5.060E-04		1.095E-02	1.634E-03	1.274E-04	1.568E-04
084	1.59	1.352E-04	5.058E-04		1.095E-02	1.650E-03	1.276E-04	1.571E-04
085	1.60	1.332E-04	5.054E-04		1.093E-02	1.671E-03	1.274E-04	1.574E-04
086	1.61	1.312E-04	5.049E-04		1.090E-02	1.694E-03	1.274E-04	1.577E-04
087	1.62	1.292E-04	5.043E-04		1.088E-02	1.710E-03	1.274E-04	1.580E-04
088	1.63	1.272E-04	5.035E-04		1.086E-02	1.732E-03	1.274E-04	1.583E-04
089	1.64	1.252E-04	5.026E-04		1.081E-02	1.744E-03	1.274E-04	1.586E-04
090	1.65	1.232E-04	5.016E-04		1.081E-02	1.761E-03	1.274E-04	1.589E-04
091	1.66	1.212E-04	5.005E-04		1.080E-02	1.781E-03	1.274E-04	1.592E-04
092	1.67	1.192E-04	4.993E-04		1.076E-02	1.793E-03	1.274E-04	1.595E-04
093	1.68	1.172E-04	4.986E-04		1.076E-02	1.814E-03	1.274E-04	1.598E-04
094	1.69	1.152E-04	4.975E-04		1.074E-02	1.830E-03	1.274E-04	1.601E-04
095	1.70	1.132E-04	4.961E-04		1.073E-02	1.846E-03	1.274E-04	1.604E-04
096	1.71	1.112E-04	4.941E-04		1.071E-02	1.867E-03	1.274E-04	1.607E-04
097	1.72	1.092E-04	4.916E-04		1.070E-02	1.885E-03	1.274E-04	1.610E-04
098	1.73	1.072E-04	4.891E-04		1.069E-02	1.904E-03	1.274E-04	1.613E-04
099	1.74	1.052E-04	4.866E-04		1.066E-02	1.923E-03	1.274E-04	1.616E-04
100	1.75	1.032E-04	4.841E-04		1.064E-02	1.943E-03	1.274E-04	1.619E-04
101	1.76	1.012E-04	4.816E-04		1.064E-02	1.962E-03	1.274E-04	1.622E-04
102	1.77	0.992E-04	4.791E-04		1.064E-02	1.981E-03	1.274E-04	1.625E-04
103	1.78	0.972E-04	4.766E-04		1.064E-02	2.000E-03	1.274E-04	1.628E-04
104	1.79	0.952E-04	4.741E-04		1.064E-02	2.019E-03	1.274E-04	1.631E-04
105	1.80	0.932E-04	4.716E-04		1.064E-02	2.038E-03	1.274E-04	1.634E-04
106	1.81	0.912E-04	4.691E-04		1.064E-02	2.057E-03	1.274E-04	1.637E-04
107	1.82	0.892E-04	4.666E-04		1.064E-02	2.076E-03	1.274E-04	1.640E-04
108	1.83	0.872E-04	4.641E-04		1.064E-02	2.095E-03	1.274E-04	1.643E-04
109	1.84	0.852E-04	4.616E-04		1.064E-02	2.114E-03	1.274E-04	1.646E-04
110	1.85	0.832E-04	4.591E-04		1.064E-02	2.133E-03	1.274E-04	1.649E-04
111	1.86	0.812E-04	4.566E-04		1.064E-02	2.152E-03	1.274E-04	1.652E-04
112	1.87	0.792E-04	4.541E-04		1.064E-02	2.171E-03	1.274E-04	1.655E-04
113	1.88	0.772E-04	4.516E-04		1.064E-02	2.190E-03	1.274E-04	1.658E-04
114	1.89	0.752E-04	4.491E-04		1.064E-02	2.209E-03	1.274E-04	1.661E-04
115	1.90	0.732E-04	4.466E-04		1.064E-02	2.228E-03	1.274E-04	1.664E-04
116	1.91	0.712E-04	4.441E-04		1.064E-02	2.247E-03	1.274E-04	1.667E-04
117	1.92	0.692E-04	4.416E-04		1.064E-02	2.266E-03	1.274E-04	1.670E-04
118	1.93	0.672E-04	4.391E-04		1.064E-02	2.285E-03	1.274E-04	1.673E-04
119	1.94	0.652E-04	4.366E-04		1.064E-02	2.304E-03	1.274E-04	1.676E-04
120	1.95	0.632E-04	4.341E-04		1.064E-02	2.323E-03	1.274E-04	1.679E-04
121	1.96	0.612E-04	4.316E-04		1.064E-02	2.342E-03	1.274E-04	1.682E-04
122	1.97	0.592E-04	4.291E-04		1.064E-02	2.361E-03	1.274E-04	1.685E-04
123	1.98	0.572E-04	4.266E-04		1.064E-02	2.380E-03	1.274E-04	1.688E-04
124	1.99	0.552E-04	4.241E-04		1.064E-02	2.399E-03	1.274E-04	1.691E-04
125	2.00	0.532E-04	4.216E-04		1.064E-02	2.418E-03	1.274E-04	1.694E-04
126	2.01	0.512E-04	4.191E-04		1.064E-02	2.437E-03	1.274E-04	1.697E-04
127	2.02	0.492E-04	4.166E-04		1.064E-02	2.456E-03	1.274E-04	1.700E-04
128	2.03	0.472E-04	4.141E-04		1.064E-02	2.475E-03	1.274E-04	1.703E-04
129	2.04	0.452E-04	4.116E-04		1.064E-02	2.494E-03	1.274E-04	1.706E-04
130	2.05	0.432E-04	4.091E-04		1.064E-02	2.513E-03	1.274E-04	1.709E-04
131	2.06	0.412E-04	4.066E-04		1.064E-02	2.532E-03	1.274E-04	1.712E-04
132	2.07	0.392E-04	4.041E-04		1.064E-02	2.551E-03	1.274E-04	1.715E-04
133	2.08	0.372E-04	4.016E-04		1.064E-02	2.570E-03	1.274E-04	1.718E-04

RUN #98	WTR 1333	STANTON NUMBERS	CO-AXIAL THE-MUCOUPLE SHAKEDOWN TEST					12/10/79-12/12/79				
			TIME	ALPHA	G1 ST	G2 ST	T1 ST	T2 ST	T3 ST	T4 ST	T5 ST	
209			698	9.49	1.948E-04	4.851E-04	1.022E-02	2.329E-03	2.211E-04	5.725E-04	1.028E-03	
210			902	9.32	1.943E-04	4.861E-04	1.021E-02	2.340E-03	2.248E-04	5.736E-04	1.010E-03	
211			906	9.16	2.017E-04	4.871E-04	1.022E-02	2.370E-03	2.294E-04	5.769E-04	9.958E-04	
212			910	9.99	2.052E-04	4.879E-04	1.018E-02	2.385E-03	2.329E-04	5.771E-04	9.753E-04	
213			914	8.83	2.087E-04	4.887E-04	1.020E-02	2.401E-03	2.371E-04	5.792E-04	9.599E-04	
214			921	8.66	2.123E-04	4.894E-04	1.021E-02	2.427E-03	2.412E-04	5.817E-04	9.410E-04	
215			923	8.50	2.159E-04	4.900E-04	1.020E-02	2.444E-03	2.450E-04	5.841E-04	9.244E-04	
216			927	8.34	2.195E-04	4.904E-04	1.022E-02	2.460E-03	2.493E-04	5.873E-04	9.121E-04	
217			931	8.18	2.232E-04	4.906E-04	1.019E-02	2.477E-03	2.525E-04	5.877E-04	8.913E-04	
218			935	8.01	2.268E-04	4.907E-04	1.020E-02	2.496E-03	2.564E-04	5.903E-04	8.755E-04	
219			939	7.85	2.305E-04	4.905E-04	1.014E-02	2.514E-03	2.598E-04	5.919E-04	8.582E-04	
220			943	7.69	2.343E-04	4.902E-04	1.018E-02	2.527E-03	2.629E-04	5.931E-04	8.440E-04	
221			944	7.54	2.381E-04	4.897E-04	1.017E-02	2.544E-03	2.666E-04	5.944E-04	8.306E-04	
222			952	7.38	2.419E-04	4.894E-04	1.011E-02	2.554E-03	2.701E-04	5.937E-04	8.119E-04	
223			956	7.22	2.457E-04	4.879E-04	1.010E-02	2.574E-03	2.741E-04	5.954E-04	8.025E-04	
224			960	7.07	2.496E-04	4.866E-04	1.004E-02	2.593E-03	2.774E-04	5.948E-04	7.876E-04	
225			964	6.91	2.536E-04	4.854E-04	9.980E-03	2.619E-03	2.817E-04	5.941E-04	7.730E-04	
226			964	6.76	2.576E-04	4.849E-04	9.932E-03	2.640E-03	2.866E-04	5.937E-04	7.647E-04	
227			973	6.61	2.616E-04	4.821E-04	9.853E-03	2.661E-03	2.907E-04	5.912E-04	7.534E-04	
228			977	6.45	2.657E-04	4.801E-04	9.806E-03	2.683E-03	2.954E-04	5.906E-04	7.473E-04	
229			981	6.30	2.698E-04	4.780E-04	9.729E-03	2.705E-03	2.994E-04	5.893E-04	7.366E-04	
230			985	6.16	2.740E-04	4.758E-04	9.639E-03	2.726E-03	3.037E-04	5.842E-04	7.254E-04	
231			989	6.01	2.783E-04	4.734E-04	9.585E-03	2.748E-03	3.090E-04	5.811E-04	7.209E-04	
232			994	5.86	2.826E-04	4.709E-04	9.513E-03	2.769E-03	3.132E-04	5.769E-04	7.127E-04	
233			997	5.72	2.870E-04	4.683E-04	9.485E-03	2.793E-03	3.182E-04	5.747E-04	7.060E-04	
234			1002	5.57	2.914E-04	4.656E-04	9.435E-03	2.815E-03	3.230E-04	5.709E-04	6.981E-04	
235			1004	5.43	2.959E-04	4.628E-04	9.376E-03	2.840E-03	3.275E-04	5.663E-04	6.903E-04	
236			1010	5.29	3.004E-04	4.600E-04	9.336E-03	2.864E-03	3.325E-04	5.611E-04	6.898E-04	
237			1014	5.15	3.049E-04	4.572E-04	9.337E-03	2.889E-03	3.367E-04	5.611E-04	6.785E-04	
238			1014	5.01	3.095E-04	4.544E-04	9.331E-03	2.914E-03	3.414E-04	5.593E-04	6.731E-04	
239			1022	4.84	3.141E-04	4.515E-04	9.289E-03	2.938E-03	3.446E-04	5.554E-04	6.615E-04	
240			1027	4.74	3.187E-04	4.487E-04	9.283E-03	2.962E-03	3.491E-04	5.531E-04	6.540E-04	
241			1031	4.61	3.233E-04	4.459E-04	9.253E-03	2.986E-03	3.540E-04	5.515E-04	6.514E-04	
242			1034	4.44	3.280E-04	4.433E-04	9.253E-03	2.994E-03	3.572E-04	5.484E-04	6.430E-04	
243			1034	4.35	3.326E-04	4.407E-04	9.233E-03	3.011E-03	3.608E-04	5.444E-04	6.349E-04	
244			1043	4.22	3.373E-04	4.383E-04	9.233E-03	3.011E-03	3.656E-04	5.444E-04	6.271E-04	
245			1047	4.09	3.419E-04	4.360E-04	9.225E-03	3.028E-03	3.703E-04	5.423E-04	6.217E-04	
246			1051	3.96	3.466E-04	4.338E-04	9.225E-03	3.047E-03	3.752E-04	5.419E-04	6.202E-04	
247			1056	3.84	3.512E-04	4.319E-04	9.217E-03	3.053E-03	3.790E-04	5.393E-04	6.094E-04	
248			1060	3.72	3.558E-04	4.301E-04	9.217E-03	3.068E-03	3.840E-04	5.388E-04	6.047E-04	
249			1064	3.60	3.604E-04	4.285E-04	9.216E-03	3.076E-03	3.891E-04	5.372E-04	6.006E-04	
250			1064	3.44	3.650E-04	4.272E-04	9.214E-03	3.083E-03	3.944E-04	5.366E-04	5.967E-04	
251			1072	3.36	3.696E-04	4.261E-04	9.212E-03	3.091E-03	4.000E-04	5.362E-04	5.908E-04	
252			1076	3.25	3.741E-04	4.252E-04	9.213E-03	3.094E-03	4.053E-04	5.356E-04	5.850E-04	
253			1081	3.14	3.786E-04	4.245E-04	9.210E-03	3.100E-03	4.099E-04	5.354E-04	5.823E-04	
254			1084	3.03	3.830E-04	4.241E-04	9.210E-03	3.106E-03	4.145E-04	5.356E-04	5.791E-04	
255			1089	2.92	3.873E-04	4.238E-04	9.208E-03	3.110E-03	4.206E-04	5.357E-04	5.741E-04	
256			1093	2.81	3.916E-04	4.236E-04	9.207E-03	3.118E-03	4.255E-04	5.362E-04	5.691E-04	
257			1097	2.70	3.958E-04	4.234E-04	9.206E-03	3.127E-03	4.296E-04	5.368E-04	5.662E-04	
258			1101	2.60	3.999E-04	4.242E-04	9.206E-03	3.135E-03	4.343E-04	5.368E-04	5.627E-04	
259			1106	2.50	4.039E-04	4.246E-04	9.205E-03	3.143E-03	4.390E-04	5.378E-04	5.591E-04	
260			1110	2.40	4.077E-04	4.252E-04	9.202E-03	3.149E-03	4.430E-04	5.364E-04	5.489E-04	
261			1114	2.30	4.114E-04	4.255E-04	9.201E-03	3.153E-03	4.472E-04	5.376E-04	5.473E-04	
262			1114	2.20	4.150E-04	4.266E-04	9.201E-03	3.160E-03	4.502E-04	5.378E-04	5.428E-04	
263			1122	2.11	4.184E-04	4.273E-04	9.201E-03	3.170E-03	4.534E-04	5.385E-04	5.381E-04	
264			1124	2.02	4.218E-04	4.281E-04	9.201E-03	3.178E-03	4.572E-04	5.393E-04	5.347E-04	

RUN #98		WTR 1333		STANTON NUMPH-5		L0-AXIAL IMELDUCOUPLE SHARED/IN		TEST		12/10/79-12/12/79	
TIME	ALPHA	61 ST	62 ST	11 ST	12 ST	13 ST	14 ST	15 ST			
265	1.130	4.247E-04	4.289F-04	4.965F-03	3.178E-03	4.596F-04	4.378E-04	5.274E-04			
266	1.135	4.276E-04	4.297E-04	4.974E-03	3.148E-03	4.620E-04	4.365E-04	5.238E-04			
267	1.139	4.303E-04	4.305E-04	4.996F-03	3.200E-03	4.646E-04	4.401E-04	5.234E-04			
268	1.143	4.328E-04	4.312E-04	4.961F-03	3.203E-03	4.662E-04	4.393E-04	5.165E-04			
269	1.147	4.351E-04	4.314E-04	4.933E-03	3.204E-03	4.645E-04	4.342E-04	5.094E-04			
270	1.151	4.373E-04	4.323E-04	4.923E-03	3.215E-03	4.714E-04	4.400E-04	5.071E-04			
271	1.155	4.393E-04	4.324E-04	4.905E-03	3.219E-03	4.733E-04	4.401E-04	5.051E-04			
272	1.160	4.412E-04	4.332E-04	4.851E-03	3.224E-03	4.752E-04	4.405E-04	5.045E-04			
273	1.164	4.424E-04	4.334E-04	4.851E-03	3.224E-03	4.760E-04	4.406E-04	4.954E-04			
274	1.164	4.445E-04	4.336E-04	4.851E-03	3.230E-03	4.786E-04	4.392E-04	4.934E-04			
275	1.172	4.461E-04	4.337E-04	4.836E-03	3.234E-03	4.805E-04	4.397E-04	4.927E-04			
276	1.174	4.475E-04	4.338E-04	4.824E-03	3.237E-03	4.816E-04	4.394E-04	4.906E-04			
277	1.180	4.490E-04	4.337E-04	4.846E-03	3.245E-03	4.834E-04	4.404E-04	4.910E-04			
278	1.184	4.503E-04	4.337E-04	4.860E-03	3.249E-03	4.851E-04	4.387E-04	4.851E-04			
279	1.189	4.517E-04	4.335E-04	4.800E-03	3.249E-03	4.883E-04	4.401E-04	4.888E-04			
280	1.193	4.531E-04	4.333E-04	4.765E-03	3.243E-03	4.848E-04	4.381E-04	4.835E-04			
281	1.197	4.545E-04	4.331E-04	4.790E-03	3.253E-03	4.913E-04	4.394E-04	4.842E-04			
282	1.201	4.559E-04	4.328E-04	4.781E-03	3.256E-03	4.934E-04	4.399E-04	4.806E-04			
283	1.205	4.574E-04	4.325E-04	4.736E-03	3.257E-03	4.954E-04	4.374E-04	4.754E-04			
284	1.204	4.589E-04	4.322E-04	4.744E-03	3.264E-03	4.980E-04	4.364E-04	4.773E-04			
285	1.214	4.604E-04	4.319E-04	4.737E-03	3.267E-03	4.999E-04	4.363E-04	4.754E-04			
286	1.214	4.620E-04	4.315E-04	4.716E-03	3.270E-03	5.016E-04	4.369E-04	4.707E-04			
287	1.222	4.635E-04	4.311E-04	4.735E-03	3.274E-03	5.040E-04	4.364E-04	4.691E-04			
288	1.224	4.651E-04	4.305E-04	4.700E-03	3.276E-03	5.058E-04	4.354E-04	4.657E-04			
289	1.230	4.666E-04	4.294E-04	4.702E-03	3.283E-03	5.082E-04	4.367E-04	4.661E-04			
290	1.234	4.680E-04	4.294E-04	4.686E-03	3.284E-03	5.098E-04	4.356E-04	4.618E-04			
291	1.234	4.693E-04	4.284E-04	4.660E-03	3.281E-03	5.112E-04	4.328E-04	4.553E-04			
292	1.243	4.705E-04	4.274E-04	4.694E-03	3.292E-03	5.146E-04	4.340E-04	4.548E-04			
293	1.247	4.715E-04	4.263E-04	4.650E-03	3.285E-03	5.153E-04	4.318E-04	4.543E-04			
294	1.251	4.724E-04	4.250E-04	4.666E-03	3.286E-03	5.166E-04	4.320E-04	4.526E-04			
295	1.255	4.730E-04	4.235E-04	4.633E-03	3.281E-03	5.167E-04	4.291E-04	4.460E-04			
296	1.254	4.734E-04	4.219E-04	4.633E-03	3.282E-03	5.189E-04	4.280E-04	4.455E-04			
297	1.263	4.736E-04	4.201E-04	4.624E-03	3.281E-03	5.206E-04	4.290E-04	4.460E-04			
298	1.264	4.736E-04	4.181E-04	4.584E-03	3.267E-03	5.194E-04	4.260E-04	4.406E-04			
299	1.272	4.733E-04	4.160E-04	4.595E-03	3.268E-03	5.200E-04	4.259E-04	4.425E-04			
300	1.274	4.728E-04	4.137E-04	4.550E-03	3.259E-03	5.195E-04	4.229E-04	4.350E-04			
301	1.280	4.721E-04	4.114E-04	4.541E-03	3.249E-03	5.201E-04	4.219E-04	4.310E-04			
302	1.284	4.712E-04	4.090E-04	4.544E-03	3.246E-03	5.203E-04	4.217E-04	4.304E-04			
303	1.284	4.702E-04	4.068E-04	4.500E-03	3.230E-03	5.187E-04	4.144E-04	4.263E-04			
304	1.293	4.691E-04	4.042E-04	4.504E-03	3.227E-03	5.190E-04	4.149E-04	4.260E-04			
305	1.297	4.684E-04	4.018E-04	4.455E-03	3.211E-03	5.179E-04	4.149E-04	4.184E-04			

CO-AXIAL THERMOCOUPLE SHAKEDOWN TEST 12/10/79-12/12/79

TIME	ALPHA	WTM 1333	TO	TOL	WALCH	PINF	TINF	UINF	RHOINF	HEINF
1.00	.07	19444.3	2664.1	3220.0	14.36	.0443	87.1	6643.1	1.327E-03	3.445E+06
1.05	.07	19466.0	2674.6	3227.0	14.33	.0450	87.6	6649.1	1.338E-03	3.497E+06
1.10	.07	19476.3	2674.6	3233.4	14.30	.0456	88.1	6644.5	1.344E-03	3.497E+06
1.15	.07	19493.5	2684.2	3239.2	14.28	.0462	88.6	6649.5	1.350E-03	3.494E+06
1.20	.07	20011.6	2688.4	3244.6	14.25	.0468	89.1	6704.0	1.371E-03	3.494E+06
1.25	.07	20030.8	2692.4	3249.7	14.22	.0474	89.5	6708.4	1.382E-03	3.494E+06
1.30	.07	20051.0	2694.2	3254.6	14.20	.0480	89.9	6712.5	1.392E-03	3.494E+06
1.35	.07	20072.1	2694.9	3259.5	14.17	.0486	90.3	6716.7	1.402E-03	3.494E+06
1.40	.07	20094.1	2703.7	3264.4	14.15	.0491	90.7	6720.4	1.411E-03	3.494E+06
1.45	.07	20116.9	2707.5	3269.3	14.14	.0495	91.0	6725.1	1.419E-03	3.494E+06
1.50	.07	20140.2	2711.5	3274.5	14.12	.0499	91.4	6729.6	1.425E-03	3.494E+06
1.55	.07	20163.7	2715.6	3279.6	14.11	.0503	91.6	6734.2	1.430E-03	3.494E+06
1.60	.07	20187.4	2719.8	3285.3	14.10	.0508	91.9	6739.1	1.434E-03	3.494E+06
1.65	.07	20210.8	2724.2	3291.1	14.09	.0508	92.2	6744.1	1.437E-03	3.494E+06
1.70	.07	20233.9	2728.8	3296.9	14.08	.0510	92.4	6749.3	1.439E-03	3.494E+06
1.75	.07	20256.4	2733.4	3303.0	14.08	.0511	92.6	6754.7	1.440E-03	3.494E+06
1.80	.07	20278.1	2738.2	3309.0	14.07	.0512	92.8	6760.1	1.440E-03	3.494E+06
1.85	.07	20294.0	2742.9	3315.1	14.07	.0513	93.0	6765.5	1.439E-03	3.494E+06
1.90	.07	20318.9	2747.6	3321.2	14.07	.0514	93.1	6770.9	1.438E-03	3.494E+06
1.95	.07	20337.8	2752.2	3327.1	14.07	.0514	93.3	6776.2	1.436E-03	3.494E+06
2.00	.07	20355.8	2756.7	3332.8	14.07	.0514	93.5	6781.3	1.435E-03	3.494E+06
2.05	.07	20372.8	2761.0	3338.4	14.07	.0515	93.6	6786.4	1.433E-03	3.494E+06
2.10	.07	20389.1	2765.2	3343.7	14.07	.0515	93.7	6791.0	1.432E-03	3.494E+06
2.15	.07	20404.8	2769.1	3348.8	14.07	.0515	93.9	6795.5	1.431E-03	3.494E+06
2.20	.07	20419.8	2772.9	3353.6	14.06	.0516	94.0	6799.4	1.430E-03	3.494E+06
2.25	.07	20434.5	2776.4	3358.1	14.06	.0516	94.2	6803.8	1.429E-03	3.494E+06
2.30	.07	20448.9	2779.4	3362.5	14.06	.0517	94.3	6807.7	1.429E-03	3.494E+06
2.35	.07	20463.2	2783.1	3366.7	14.06	.0518	94.4	6811.4	1.429E-03	3.494E+06
2.40	.07	20477.4	2786.2	3370.8	14.06	.0518	94.6	6815.0	1.429E-03	3.494E+06
2.45	.07	20491.6	2789.3	3374.8	14.05	.0519	94.7	6818.6	1.429E-03	3.494E+06
2.50	.07	20505.9	2792.4	3378.8	14.05	.0520	94.8	6822.1	1.430E-03	3.494E+06
2.55	.07	20520.3	2795.5	3382.6	14.05	.0521	95.0	6825.6	1.430E-03	3.494E+06
2.60	.07	20534.7	2798.6	3386.9	14.04	.0522	95.1	6829.2	1.431E-03	3.494E+06
2.65	.07	20549.1	2801.9	3391.1	14.04	.0523	95.3	6832.8	1.431E-03	3.494E+06
2.70	.07	20563.6	2805.2	3395.4	14.04	.0524	95.4	6836.4	1.431E-03	3.494E+06
2.75	.07	20577.9	2808.7	3399.9	14.03	.0525	95.6	6840.6	1.431E-03	3.494E+06
2.80	.07	20592.1	2812.3	3404.6	14.03	.0526	95.7	6844.7	1.431E-03	3.494E+06
2.85	.07	20606.5	2815.1	3409.4	14.03	.0526	95.9	6848.9	1.431E-03	3.494E+06
2.90	.07	20620.8	2818.0	3414.4	14.02	.0527	96.1	6853.3	1.431E-03	3.494E+06
2.95	.07	20635.2	2821.4	3419.5	14.02	.0528	96.2	6857.8	1.430E-03	3.494E+06
3.00	.07	20649.4	2824.1	3424.0	14.02	.0529	96.4	6862.4	1.429E-03	3.494E+06
3.05	.07	20663.7	2826.2	3428.1	14.02	.0529	96.6	6867.1	1.429E-03	3.494E+06
3.10	.07	20677.9	2828.4	3432.4	14.01	.0530	96.7	6871.7	1.428E-03	3.494E+06
3.15	.07	20692.1	2830.5	3436.5	14.01	.0531	96.9	6876.3	1.427E-03	3.494E+06
3.20	.07	20706.3	2832.6	3440.7	14.01	.0531	97.0	6880.8	1.426E-03	3.494E+06
3.25	.07	20720.5	2834.7	3444.8	14.01	.0531	97.2	6885.2	1.426E-03	3.494E+06
3.30	.07	20734.7	2836.8	3448.9	14.00	.0532	97.4	6889.7	1.425E-03	3.494E+06
3.35	.07	20748.9	2838.9	3453.0	14.00	.0533	97.5	6894.2	1.425E-03	3.494E+06
3.40	.07	20763.1	2841.0	3457.1	14.00	.0533	97.6	6898.7	1.424E-03	3.494E+06
3.45	.07	20777.3	2843.1	3461.2	14.00	.0534	97.8	6903.2	1.424E-03	3.494E+06
3.50	.07	20791.5	2845.2	3465.3	14.00	.0534	98.0	6907.7	1.424E-03	3.494E+06
3.55	.07	20805.7	2847.3	3469.4	14.00	.0535	98.1	6912.2	1.424E-03	3.494E+06
3.60	.07	20819.9	2849.4	3473.5	14.00	.0535	98.2	6916.7	1.423E-03	3.494E+06
3.65	.07	20834.1	2851.5	3477.6	14.00	.0536	98.3	6921.2	1.423E-03	3.494E+06
3.70	.07	20848.3	2853.6	3481.7	14.00	.0537	98.4	6925.7	1.423E-03	3.494E+06
3.75	.07	20862.5	2855.7	3485.8	14.00	.0537	98.5	6930.2	1.423E-03	3.494E+06
3.80	.07	20876.7	2857.8	3489.9	14.00	.0537	98.6	6934.7	1.423E-03	3.494E+06
3.85	.07	20890.9	2859.9	3494.0	14.00	.0537	98.7	6939.2	1.423E-03	3.494E+06
3.90	.07	20905.1	2862.0	3498.1	14.00	.0537	98.8	6943.7	1.423E-03	3.494E+06
3.95	.07	20919.3	2864.1	3502.2	14.00	.0537	98.9	6948.2	1.423E-03	3.494E+06
4.00	.07	20933.5	2866.2	3506.3	14.00	.0537	99.0	6952.7	1.423E-03	3.494E+06
4.05	.07	20947.7	2868.3	3510.4	14.00	.0537	99.1	6957.2	1.423E-03	3.494E+06
4.10	.07	20961.9	2870.4	3514.5	14.00	.0537	99.2	6961.7	1.423E-03	3.494E+06
4.15	.07	20976.1	2872.5	3518.6	14.00	.0537	99.3	6966.2	1.423E-03	3.494E+06
4.20	.07	20990.3	2874.6	3522.7	14.00	.0537	99.4	6970.7	1.423E-03	3.494E+06
4.25	.07	20999.4	2876.7	3526.8	14.00	.0537	99.5	6975.2	1.423E-03	3.494E+06
4.30	.07	21008.5	2878.8	3530.9	14.00	.0537	99.6	6979.7	1.423E-03	3.494E+06
4.35	.07	21017.6	2880.9	3535.0	14.00	.0537	99.7	6984.2	1.423E-03	3.494E+06
4.40	.07	21026.7	2883.0	3539.1	14.00	.0537	99.8	6988.7	1.423E-03	3.494E+06
4.45	.07	21035.8	2885.1	3543.2	14.00	.0537	99.9	6993.2	1.423E-03	3.494E+06
4.50	.07	21044.9	2887.2	3547.3	14.00	.0537	100.0	6997.7	1.423E-03	3.494E+06
4.55	.07	21054.0	2889.3	3551.4	14.00	.0537	100.1	7002.2	1.423E-03	3.494E+06
4.60	.07	21063.1	2891.4	3555.5	14.00	.0537	100.2	7006.7	1.423E-03	3.494E+06
4.65	.07	21072.2	2893.5	3559.6	14.00	.0537	100.3	7011.2	1.423E-03	3.494E+06
4.70	.07	21081.3	2895.6	3563.7	14.00	.0537	100.4	7015.7	1.423E-03	3.494E+06
4.75	.07	21090.4	2897.7	3567.8	14.00	.0537	100.5	7020.2	1.423E-03	3.494E+06
4.80	.07	21099.5	2899.8	3571.9	14.00	.0537	100.6	7024.7	1.423E-03	3.494E+06
4.85	.07	21108.6	2901.9	3576.0	14.00	.0537	100.7	7029.2	1.423E-03	3.494E+06
4.90	.07	21117.7	2904.0	3580.1	14.00	.0537	100.8	7033.7	1.423E-03	3.494E+06
4.95	.07	21126.8	2906.1	3584.2	14.00	.0537	100.9	7038.2	1.423E-03	3.494E+06
5.00	.07	21135.9	2908.2	3588.3	14.00	.0537	101.0	7042.7	1.423E-03	3.494E+06
5.05	.07	21145.0	2910.3	3592.4	14.00	.0537	101.1	7047.2	1.423E-03	3.494E+06
5.10	.07	21154.1	2912.4	3596.5	14.00	.0537	101.2	7051.7	1.423E-03	3.494E+06
5.15	.07	21163.2	2914.5	3600.6	14.00	.0537	101.3	7056.2	1.423E-03	3.494E+06
5.20	.07	21172.3	2916.6	3604.7	14.00	.0537	101.4	7060.7	1.423E-03	3.494E+06
5.25	.07	21181.4	2918.7	3608.8	14.00	.0537	101.5	7065.2	1.423E-03	3.494E+06
5.30	.07	21190.5	2920.8	3612.9	14.00	.0537	101.6	7069.7	1.423E-03	3.494E+06
5.35	.07	21199.6	2922.9	3617.0	14.00	.0537	101.7	7074.2	1.423E-03	3.494E+06
5.40	.07	21208.7	2925.0	3621.1	14.00	.0537	101.8	7078.7	1.423E-03	3.494E+06
5.45	.07	21217.8	2927.1	3625.2	14.00	.0537	101.9	7083.2	1.423E-03	3.494E+06
5.50	.07	21226.9	2929.2	3629.3	14.00	.0537	102.0	7087.7	1.423E-03	3.494E+06
5.55	.07	21236.0	2931.3	3633.4	14.00	.0537	102.1	7092.2	1.423E-03	3.494E+06
5.60	.07	21245.1	2933.4	3637.5	14.00	.0537	102.2	7096.7	1.423E-03	3.494E+06
5.65	.07	21254.2	2935.5	3641.6	14.00	.0537	102.3	7101.2	1.423E-03	3.494E+06
5.70	.07	21263.3	2937.6	3645.7	14.00	.0537	102.4	7105.7	1.423E-03	3.494E+06
5.75	.07	21272.4	2939.7	3649.8	14.00	.0537	102.5	7110.2	1.423E-03	3.494E+06
5.80	.07	21281.5	2941.8	3653.9	14.00	.0537	102.6	7114.7	1.423E-03	3.494E+06
5.85	.07	21290.6	2943.9	3658.0	14.00	.0537	102.7	7119.2	1.423E-03	3.494E+06
5.90	.07	21299.7	2946.0	3662.1	14.00	.0537	102.8	7123.7	1.423E-03	3.494E+06
5.95	.07	21308.8	2948.1	3666.2						

[illegible]

CO-AXIAL THERMOCOUPLE SHAKEDOWN TEST 12/10/79-12/12/79

TIME	ALPHA	RT-1333	10	101	WACH	PINT	TL-F	UINF	RHULNF	KELNF
0.32	.07	20434.0	2875.0	3488.4	13.59	.0530	98.4	6916.7	1.426E-03	3.844E+06
0.33	.07	20437.2	2877.1	3488.4	13.59	.0530	98.4	6918.0	1.426E-03	3.844E+06
0.40	.07	20436.3	2874.0	3490.4	13.58	.0539	98.5	6919.7	1.427E-03	3.844E+06
0.44	.07	20473.0	2880.1	3492.5	13.58	.0539	98.6	6921.5	1.427E-03	3.844E+06
0.47	.07	20488.8	2881.8	3494.7	13.58	.0540	98.6	6923.5	1.427E-03	3.844E+06
0.50	.07	20499.9	2883.6	3497.2	13.58	.0541	98.7	6925.6	1.428E-03	3.844E+06
0.57	.07	20492.7	2885.6	3499.0	13.58	.0541	98.8	6927.9	1.428E-03	3.844E+06
0.61	.07	20495.3	2887.7	3502.7	13.58	.0542	98.9	6930.4	1.428E-03	3.844E+06
0.66	.07	20497.0	2890.1	3505.9	13.59	.0542	99.0	6933.1	1.428E-03	3.844E+06
0.69	.07	20497.0	2892.7	3509.2	13.57	.0543	99.1	6936.1	1.428E-03	3.844E+06
0.74	.07	20498.1	2895.4	3512.8	13.57	.0543	99.2	6939.2	1.428E-03	3.844E+06
0.77	.07	20497.0	2898.3	3516.0	13.57	.0545	99.3	6942.4	1.428E-03	3.844E+06
0.84	.07	20498.0	2901.3	3520.4	13.57	.0545	99.5	6945.7	1.427E-03	3.844E+06
0.88	.07	20498.0	2904.4	3524.4	13.56	.0545	99.6	6949.1	1.427E-03	3.844E+06
0.91	.07	20498.0	2907.4	3528.5	13.56	.0546	99.7	6952.6	1.427E-03	3.844E+06
0.94	.07	20498.0	2910.4	3532.2	13.56	.0546	99.9	6955.9	1.426E-03	3.844E+06
0.98	.07	20498.0	2913.4	3536.0	13.56	.0547	100.0	6959.2	1.426E-03	3.844E+06
1.02	.07	20498.0	2916.2	3539.0	13.55	.0548	100.1	6962.5	1.426E-03	3.844E+06
1.07	.07	20498.0	2919.9	3543.0	13.55	.0548	100.2	6965.8	1.426E-03	3.844E+06
1.11	.07	20498.0	2921.3	3546.2	13.55	.0549	100.4	6969.0	1.426E-03	3.844E+06
1.15	.07	20498.0	2923.6	3549.1	13.55	.0549	100.5	6972.2	1.426E-03	3.844E+06
1.19	.07	20498.0	2925.6	3551.8	13.54	.0550	100.6	6975.4	1.426E-03	3.844E+06
1.22	.07	20498.0	2927.5	3554.1	13.54	.0550	100.7	6978.6	1.426E-03	3.844E+06
1.26	.07	20498.0	2929.4	3556.5	13.54	.0551	100.8	6981.8	1.426E-03	3.844E+06
1.30	.07	20498.0	2931.3	3558.0	13.54	.0552	100.9	6985.0	1.426E-03	3.844E+06
1.34	.07	20498.0	2933.2	3559.4	13.54	.0552	101.0	6988.2	1.426E-03	3.844E+06
1.38	.07	20498.0	2935.1	3560.9	13.53	.0553	101.1	6991.4	1.426E-03	3.844E+06
1.42	.07	20498.0	2937.0	3562.0	13.53	.0553	101.2	6994.6	1.426E-03	3.844E+06
1.46	.07	20498.0	2938.9	3563.5	13.53	.0553	101.3	6997.8	1.426E-03	3.844E+06
1.50	.07	20498.0	2940.8	3565.0	13.53	.0553	101.4	7001.0	1.426E-03	3.844E+06
1.54	.07	20498.0	2942.7	3566.5	13.53	.0553	101.5	7004.2	1.426E-03	3.844E+06
1.58	.07	20498.0	2944.6	3568.0	13.53	.0553	101.6	7007.4	1.426E-03	3.844E+06
1.62	.07	20498.0	2946.5	3569.5	13.53	.0553	101.7	7010.6	1.426E-03	3.844E+06
1.66	.07	20498.0	2948.4	3571.0	13.53	.0553	101.8	7013.8	1.426E-03	3.844E+06
1.70	.07	20498.0	2950.3	3572.5	13.53	.0553	101.9	7017.0	1.426E-03	3.844E+06
1.74	.07	20498.0	2952.2	3574.0	13.53	.0553	102.0	7020.2	1.426E-03	3.844E+06
1.78	.07	20498.0	2954.1	3575.5	13.53	.0553	102.1	7023.4	1.426E-03	3.844E+06
1.82	.07	20498.0	2956.0	3577.0	13.53	.0553	102.2	7026.6	1.426E-03	3.844E+06
1.86	.07	20498.0	2957.9	3578.5	13.53	.0553	102.3	7029.8	1.426E-03	3.844E+06
1.90	.07	20498.0	2959.8	3580.0	13.53	.0553	102.4	7033.0	1.426E-03	3.844E+06
1.94	.07	20498.0	2961.7	3581.5	13.53	.0553	102.5	7036.2	1.426E-03	3.844E+06
1.98	.07	20498.0	2963.6	3583.0	13.53	.0553	102.6	7039.4	1.426E-03	3.844E+06
2.02	.07	20498.0	2965.5	3584.5	13.53	.0553	102.7	7042.6	1.426E-03	3.844E+06
2.06	.07	20498.0	2967.4	3586.0	13.53	.0553	102.8	7045.8	1.426E-03	3.844E+06
2.10	.07	20498.0	2969.3	3587.5	13.53	.0553	102.9	7049.0	1.426E-03	3.844E+06
2.14	.07	20498.0	2971.2	3589.0	13.53	.0553	103.0	7052.2	1.426E-03	3.844E+06
2.18	.07	20498.0	2973.1	3590.5	13.53	.0553	103.1	7055.4	1.426E-03	3.844E+06
2.22	.07	20498.0	2975.0	3592.0	13.53	.0553	103.2	7058.6	1.426E-03	3.844E+06
2.26	.07	20498.0	2976.9	3593.5	13.53	.0553	103.3	7061.8	1.426E-03	3.844E+06
2.30	.07	20498.0	2978.8	3595.0	13.53	.0553	103.4	7065.0	1.426E-03	3.844E+06
2.34	.07	20498.0	2980.7	3596.5	13.53	.0553	103.5	7068.2	1.426E-03	3.844E+06
2.38	.07	20498.0	2982.6	3598.0	13.53	.0553	103.6	7071.4	1.426E-03	3.844E+06
2.42	.07	20498.0	2984.5	3599.5	13.53	.0553	103.7	7074.6	1.426E-03	3.844E+06
2.46	.07	20498.0	2986.4	3601.0	13.53	.0553	103.8	7077.8	1.426E-03	3.844E+06
2.50	.07	20498.0	2988.3	3602.5	13.53	.0553	103.9	7081.0	1.426E-03	3.844E+06
2.54	.07	20498.0	2990.2	3604.0	13.53	.0553	104.0	7084.2	1.426E-03	3.844E+06
2.58	.07	20498.0	2992.1	3605.5	13.53	.0553	104.1	7087.4	1.426E-03	3.844E+06
2.62	.07	20498.0	2994.0	3607.0	13.53	.0553	104.2	7090.6	1.426E-03	3.844E+06
2.66	.07	20498.0	2995.9	3608.5	13.53	.0553	104.3	7093.8	1.426E-03	3.844E+06
2.70	.07	20498.0	2997.8	3610.0	13.53	.0553	104.4	7097.0	1.426E-03	3.844E+06
2.74	.07	20498.0	2999.7	3611.5	13.53	.0553	104.5	7100.2	1.426E-03	3.844E+06
2.78	.07	20498.0	3001.6	3613.0	13.53	.0553	104.6	7103.4	1.426E-03	3.844E+06
2.82	.07	20498.0	3003.5	3614.5	13.53	.0553	104.7	7106.6	1.426E-03	3.844E+06
2.86	.07	20498.0	3005.4	3616.0	13.53	.0553	104.8	7109.8	1.426E-03	3.844E+06
2.90	.07	20498.0	3007.3	3617.5	13.53	.0553	104.9	7113.0	1.426E-03	3.844E+06
2.94	.07	20498.0	3009.2	3619.0	13.53	.0553	105.0	7116.2	1.426E-03	3.844E+06
2.98	.07	20498.0	3011.1	3620.5	13.53	.0553	105.1	7119.4	1.426E-03	3.844E+06
3.02	.07	20498.0	3013.0	3622.0	13.53	.0553	105.2	7122.6	1.426E-03	3.844E+06
3.06	.07	20498.0	3014.9	3623.5	13.53	.0553	105.3	7125.8	1.426E-03	3.844E+06
3.10	.07	20498.0	3016.8	3625.0	13.53	.0553	105.4	7129.0	1.426E-03	3.844E+06
3.14	.07	20498.0	3018.7	3626.5	13.53	.0553	105.5	7132.2	1.426E-03	3.844E+06
3.18	.07	20498.0	3020.6	3628.0	13.53	.0553	105.6	7135.4	1.426E-03	3.844E+06
3.22	.07	20498.0	3022.5	3629.5	13.53	.0553	105.7	7138.6	1.426E-03	3.844E+06
3.26	.07	20498.0	3024.4	3631.0	13.53	.0553	105.8	7141.8	1.426E-03	3.844E+06
3.30	.07	20498.0	3026.3	3632.5	13.53	.0553	105.9	7145.0	1.426E-03	3.844E+06
3.34	.07	20498.0	3028.2	3634.0	13.53	.0553	106.0	7148.2	1.426E-03	3.844E+06
3.38	.07	20498.0	3030.1	3635.5	13.53	.0553	106.1	7151.4	1.426E-03	3.844E+06
3.42	.07	20498.0	3032.0	3637.0	13.53	.0553	106.2	7154.6	1.426E-03	3.844E+06
3.46	.07	20498.0	3033.9	3638.5	13.53	.0553	106.3	7157.8	1.426E-03	3.844E+06
3.50	.07	20498.0	3035.8	3640.0	13.53	.0553	106.4	7161.0	1.426E-03	3.844E+06
3.54	.07	20498.0	3037.7	3641.5	13.53	.0553	106.5	7164.2	1.426E-03	3.844E+06
3.58	.07	20498.0	3039.6	3643.0	13.53	.0553	106.6	7167.4	1.426E-03	3.844E+06
3.62	.07	20498.0	3041.5	3644.5	13.53	.0553	106.7	7170.6	1.426E-03	3.844E+06
3.66	.07	20498.0	3043.4	3646.0	13.53	.0553	106.8	7173.8	1.426E-03	3.844E+06
3.70	.07	20498.0	3045.3	3647.5	13.53	.0553	106.9	7177.0	1.426E-03	3.844E+06
3.74	.07	20498.0	3047.2	3649.0	13.53	.0553	107.0	7180.2	1.426E-03	3.844E+06
3.78	.07	20498.0	3049.1	3650.5	13.53	.0553	107.1	7183.4	1.426E-03	3.844E+06
3.82	.07	20498.0	3051.0	3652.0	13.53	.0553	107.2	7186.6	1.426E-03	3.844E+06
3.86	.07	20498.0	3052.9	3653.5	13.53	.0553	107.3	7189.8	1.426E-03	3.844E+06
3.90	.07	20498.0	3054.8	3655.0	13.53	.0553	107.4	7193.0	1.426E-03	3.844E+06
3.94	.07	20498.0	3056.7	3656.5	13.53	.0553	107.5	7196.2	1.426E-03	3.844E+06
3.98	.07	20498.0	3058.6	3658.0	13.53	.0553	107.6	7199.4	1.426E-03	3.844E+06
4.02	.07	20498.0	3060.5	3659.5	13.53	.0553	107.7	7202.6	1.426E-03	3.844E+06
4.06	.07	20498.0	3062.4	3661.0	13.53	.0553	107.8	7205.8	1.426E-03	3.844E+06
4.10	.07	20498.0	3064.3	3662.5	13.53	.0553	107.9	7209.0	1.426E-03	3.844E+06
4.14	.07	20498.0	3066.2	3664.0	13.53	.0553	108.0	7212.2	1.426E-03	3.844E+06
4.18	.07	20498.0	3068.1	3665.5	13.53	.0553	108.1	7215.4	1.426E-03	3.844E+06
4.22	.07	20498.0	3070.0	3667.0	13.53	.0553	108.2	7218.6	1.426E-03	3.844E+06
4.26	.07	20498.0	3071.9	3668.5	13.53	.0553	108.3	7221.8	1.426E-03	3.844E+06
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TIME	WTH	ALPHA	P0	Y0	T01	WACH	WINT	TIME	UINF	MHOINF	HEINF
0.66	0.07	21201.0	29694.8	29694.3	13.70	0.563	102.5	7016.8	1.432E-03	3.762E+06	
0.69	0.07	21204.7	29696.8	3607.5	13.70	0.563	102.6	7018.9	1.432E-03	3.764E+06	
0.73	0.07	21207.4	29697.8	3607.2	13.70	0.564	102.7	7020.1	1.431E-03	3.764E+06	
0.77	0.07	21209.0	29698.1	3608.9	13.70	0.564	102.7	7021.8	1.431E-03	3.764E+06	
0.81	0.07	21211.3	29700.3	3610.4	13.69	0.564	102.8	7022.8	1.431E-03	3.764E+06	
0.85	0.07	21212.5	29713.3	3611.0	13.69	0.564	102.8	7023.9	1.431E-03	3.764E+06	
0.88	0.07	21212.6	29712.1	3612.0	13.69	0.564	102.8	7024.8	1.431E-03	3.764E+06	
0.89	0.07	21212.6	29712.7	3612.6	13.69	0.564	102.8	7025.4	1.431E-03	3.764E+06	
0.94	0.07	21211.1	29713.1	3613.9	13.69	0.564	102.9	7025.8	1.430E-03	3.764E+06	
0.97	0.06	21209.2	29713.3	3614.1	13.69	0.564	102.9	7026.1	1.430E-03	3.764E+06	
0.98	0.06	21208.5	29713.3	3614.1	13.69	0.564	102.9	7026.1	1.430E-03	3.764E+06	
1.00	0.07	21201.0	29713.1	3613.9	13.69	0.564	102.9	7025.9	1.429E-03	3.764E+06	
1.04	0.08	21198.0	2972.9	3613.5	13.69	0.564	102.9	7025.7	1.429E-03	3.764E+06	
1.05	0.11	21194.4	2972.5	3612.9	13.69	0.563	102.8	7025.0	1.428E-03	3.764E+06	
1.25	0.15	21183.1	2971.0	3612.2	13.69	0.563	102.8	7024.8	1.428E-03	3.764E+06	
1.27	0.28	21163.4	2971.5	3611.5	13.69	0.563	102.8	7023.9	1.428E-03	3.764E+06	
1.31	0.25	21171.4	2970.9	3610.7	13.69	0.563	102.8	7023.1	1.428E-03	3.764E+06	
1.33	0.32	21171.0	2970.3	3609.9	13.69	0.563	102.7	7022.4	1.428E-03	3.764E+06	
1.34	0.40	21166.3	2969.8	3609.1	13.69	0.562	102.7	7021.4	1.427E-03	3.764E+06	
1.43	0.51	21157.5	2969.3	3608.5	13.69	0.562	102.7	7021.2	1.427E-03	3.764E+06	
1.54	0.59	21147.5	2969.0	3607.9	13.69	0.562	102.7	7020.7	1.427E-03	3.764E+06	
1.61	0.64	21143.5	2968.7	3607.5	13.69	0.562	102.7	7020.4	1.427E-03	3.764E+06	
1.65	0.61	21139.3	2968.5	3607.2	13.69	0.562	102.7	7020.1	1.427E-03	3.764E+06	
1.66	1.07	21129.1	2968.5	3607.0	13.69	0.562	102.7	7019.9	1.426E-03	3.764E+06	
1.67	1.22	21118.0	2968.1	3607.0	13.69	0.562	102.7	7020.0	1.426E-03	3.764E+06	
1.71	1.37	21107.1	2968.9	3607.2	13.69	0.562	102.7	7020.1	1.425E-03	3.764E+06	
1.77	1.54	21099.0	2969.1	3607.5	13.69	0.561	102.7	7020.3	1.425E-03	3.764E+06	
1.81	1.71	21091.9	2969.5	3607.8	13.69	0.561	102.7	7020.4	1.424E-03	3.764E+06	
1.88	1.89	21086.1	2969.8	3608.1	13.69	0.561	102.7	7020.8	1.423E-03	3.764E+06	
1.94	2.06	21078.0	2970.1	3608.1	13.69	0.560	102.7	7021.1	1.422E-03	3.764E+06	
1.99	2.29	21067.7	2970.3	3608.0	13.69	0.560	102.7	7021.3	1.421E-03	3.764E+06	
2.07	2.50	21059.2	2970.5	3608.7	13.69	0.559	102.7	7021.4	1.419E-03	3.764E+06</	

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
3	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
4	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
5	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
6	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
7	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
8	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
9	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
10	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
11	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
12	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
13	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
14	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
15	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
16	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
17	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
18	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
19	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
20	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
21	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
22	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330
23	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345
24	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360
25	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375
26	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390
27	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405
28	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420
29	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435
30	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450
31	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465

CO-AXIAL THERMOCOUPLE SHAKE-OUT TEST 12/10/79-12/12/79

TIME	ALPHA	WTP	1353	CO-AXIAL THERMOCOUPLE SHAKE-OUT TEST	TIME	WTEMP	RHOINF	REINF
1.09	9.35	20720.9	2946.4	TO	101.4	6991.1	1.410E-03	3.715E+06
1.10	9.60	20713.9	2945.1	3572.5	101.4	6991.1	1.409E-03	3.715E+06
1.10	10.00	20697.3	2943.7	3570.1	101.7	6998.7	1.409E-03	3.715E+06
1.11	10.32	20685.1	2942.3	3567.0	101.6	6996.4	1.408E-03	3.715E+06
1.11	10.65	20671.1	2940.7	3565.0	101.6	6996.4	1.408E-03	3.715E+06
1.11	10.97	20657.4	2939.9	3553.5	101.4	6992.4	1.407E-03	3.715E+06
1.12	11.20	20643.0	2938.6	3550.7	101.4	6990.0	1.407E-03	3.715E+06
1.12	11.61	20630.0	2936.3	3547.4	101.4	6977.1	1.407E-03	3.715E+06
1.13	11.93	20616.1	2931.4	3543.5	101.2	6973.4	1.407E-03	3.722E+06
1.13	12.24	20601.9	2927.9	3540.4	101.0	6969.4	1.407E-03	3.722E+06
1.13	12.55	20587.3	2923.8	3537.3	100.9	6965.2	1.408E-03	3.711E+06
1.14	12.86	20572.1	2919.0	3537.3	100.7	6959.0	1.409E-03	3.736E+06
1.14	13.16	20558.3	2915.4	3530.1	100.4	6953.5	1.411E-03	3.747E+06
1.15	13.46	20543.8	2911.0	3521.6	100.2	6946.4	1.413E-03	3.757E+06
1.15	13.76	20529.6	2909.8	3512.6	99.9	6938.3	1.415E-03	3.769E+06
1.16	14.04	20514.7	2907.1	3508.2	99.6	6929.4	1.416E-03	3.773E+06
1.16	14.33	20499.1	2902.8	3490.2	99.3	6919.4	1.420E-03	3.770E+06
1.17	14.60	20482.9	2907.0	3470.4	99.4	6908.6	1.424E-03	3.815E+06
1.17	14.88	20467.2	2902.5	3467.0	99.4	6906.7	1.427E-03	3.815E+06
1.17	15.14	20451.2	2901.3	3456.0	99.0	6894.7	1.431E-03	3.844E+06
1.18	15.40	20436.9	2903.5	3437.9	97.6	6871.4	1.436E-03	3.876E+06
1.18	15.65	20422.5	2907.1	3420.3	97.1	6870.7	1.440E-03	3.899E+06
1.18	15.89	20407.3	2914.3	3404.1	96.6	6863.7	1.445E-02	3.923E+06
1.19	16.13	20392.3	2901.1	3347.5	96.1	6856.4	1.449E-03	3.947E+06
1.19	16.37	20377.0	2916.7	3330.7	95.6	6814.0	1.453E-03	3.973E+06
1.20	16.61	20361.8	2914.1	3313.1	95.1	6799.0	1.459E-03	3.999E+06
1.20	16.84	20346.8	2900.7	3300.6	94.5	6793.4	1.466E-03	4.020E+06
1.20	17.07	20331.8	2900.8	3319.6	94.0	6788.7	1.469E-03	4.035E+06
1.21	17.31	20316.4	2913.3	3302.7	93.4	6783.5	1.474E-03	4.050E+06
1.21	17.54	20301.4	2911.8	3285.9	93.0	6778.6	1.480E-03	4.104E+06
1.22	17.78	20286.4	2900.4	3269.3	92.4	6773.7	1.485E-04	4.135E+06
1.22	18.01	20271.4	2903.2	3252.7	92.0	6768.7	1.490E-03	4.164E+06
1.23	18.25	20256.4	2900.1	3236.7	91.7	6764.7	1.495E-03	4.190E+06
1.23	18.48	20241.4	2907.2	3220.7	91.0	6760.1	1.500E-03	4.214E+06
1.23	18.71	20226.4	2904.4	3204.9	90.4	6755.4	1.505E-03	4.240E+06
1.24	18.94	20211.4	2901.6	3189.1	90.0	6751.4	1.511E-03	4.274E+06
1.24	19.17	20196.4	2902.9	3173.3	89.4	6747.0	1.516E-03	4.302E+06
1.25	19.40	20181.4	2916.1	3157.5	88.8	6742.7	1.522E-03	4.331E+06
1.25	19.63	20166.4	2903.2	3141.6	88.4	6738.4	1.527E-03	4.360E+06
1.25	19.86	20151.4	2900.2	3125.6	88.1	6733.7	1.533E-03	4.380E+06
1.25	20.09	20136.4	2901.4	3109.4	87.7	6729.4	1.540E-03	4.417E+06

L N	499	STR 1433	CU-AXIAL THERMOCOUPLE	SHAPFURN TEST	12/10/79-12/12/79			
TIME	ALPHA	61 000T	62 000T	63 000T	11 14	11 000T	12 14	12 000T
1.097	9.35	1.121	2.032	8.153	271.89	82.447	143.41	17.073
1.101	9.04	1.072	2.036	8.427	271.40	82.703	143.13	16.739
1.106	10.00	1.027	2.038	8.708	271.50	82.556	142.91	16.451
1.110	10.52	1.000	2.040	8.990	271.57	82.704	142.70	16.046
1.114	10.65	1.042	2.041	9.248	271.34	82.544	142.50	15.776
1.118	10.97	1.072	2.041	9.585	271.23	82.546	142.35	15.523
1.122	11.07	1.080	2.034	9.886	271.54	83.584	142.07	15.012
1.124	11.01	1.061	2.037	10.140	271.74	83.435	141.97	14.736
1.130	11.93	1.040	2.034	10.446	271.44	83.425	141.64	14.536
1.133	12.24	1.022	2.033	10.802	271.06	83.497	141.43	14.397
1.134	12.55	1.005	2.025	11.139	270.77	83.523	141.22	14.175
1.141	12.86	1.079	2.021	11.413	270.47	83.534	141.00	13.912
1.147	13.16	1.042	2.011	11.718	270.18	83.522	140.84	13.685
1.151	13.46	1.072	2.004	12.014	269.81	83.535	140.74	13.455
1.155	13.76	1.042	2.004	12.308	269.46	83.536	140.36	13.244
1.160	14.04	1.042	2.004	12.596	269.12	83.502	140.04	12.949
1.164	14.33	1.072	2.011	12.877	268.77	83.514	139.80	12.684
1.168	14.60	1.042	2.004	13.150	268.44	83.515	139.59	12.404
1.172	14.88	1.072	2.004	13.413	268.06	83.502	139.30	12.130
1.176	15.14	1.042	2.004	13.667	267.64	83.524	139.10	11.872
1.180	15.40	1.042	2.014	13.904	267.23	83.545	138.84	11.641
1.184	15.65	1.072	2.004	14.134	266.82	83.522	138.60	11.456
1.188	15.89	1.072	2.004	14.376	266.44	83.544	138.31	11.264
1.194	16.13	1.042	2.004	14.600	266.05	83.555	138.10	11.090
1.198	16.35	1.072	2.004	14.749	265.63	83.560	137.82	10.911
1.201	16.57	1.032	2.004	14.923	265.26	83.572	137.54	10.742
1.205	16.78	1.042	2.004	15.041	264.86	83.573	137.32	10.542
1.208	16.98	1.072	2.004	15.224	264.47	83.549	137.11	10.320
1.214	17.17	1.042	2.004	15.356	264.03	83.574	136.83	10.134
1.217	17.35	1.012	2.004	15.454	263.56	83.548	136.62	9.962
1.222	17.52	1.031	2.004	15.552	263.09	83.545	136.33	9.802
1.226	17.68	1.070	2.004	15.626	262.51	79.455	136.12	9.647
1.230	17.84	1.067	2.004	15.680	261.91	79.451	135.91	9.519
1.234	17.98	1.042	2.004	15.731	261.40	78.507	135.70	9.419
1.244	18.22	1.100	2.023	15.757	260.80	76.507	135.41	9.319
1.247	18.33	1.113	2.014	15.788	260.04	76.276	135.20	9.244
1.251	18.43	1.122	2.014	15.784	259.36	77.496	134.99	9.126
1.254	18.51	1.130	2.014	15.744	258.74	77.496	134.78	9.050
1.254	18.51	1.167	2.147	15.710	258.14	76.504	134.56	9.000
1.259	18.59	1.153	2.147	15.662	257.53	76.504	134.34	9.000

HUN 499 WTH 1333 STANTON NUMBERS LO-AXIAL THERMOCOUPLE SHAWTUM TEST 12/10/79-12/17/79

TIME	APHA	61 ST	62 ST	63 ST	11 ST	12 ST	T4 ST	T5 ST
89	.07	4.51E-04	3.190E-04	4.47E-04	4.130E-03	3.67E-04	6.36E-04	6.65E-04
90	.07	4.49E-04	3.157E-04	4.43E-04	4.073E-03	3.64E-04	6.31E-04	6.61E-04
91	.07	4.46E-04	3.124E-04	4.40E-04	4.036E-03	3.62E-04	6.27E-04	6.57E-04
92	.07	4.42E-04	3.092E-04	4.36E-04	4.000E-03	3.60E-04	6.23E-04	6.53E-04
93	.07	4.39E-04	3.063E-04	4.33E-04	3.964E-03	3.57E-04	6.19E-04	6.49E-04
94	.07	4.37E-04	3.036E-04	4.30E-04	3.929E-03	3.55E-04	6.15E-04	6.45E-04
95	.07	4.34E-04	3.011E-04	4.27E-04	3.895E-03	3.53E-04	6.11E-04	6.41E-04
96	.07	4.32E-04	2.989E-04	4.25E-04	3.872E-03	3.52E-04	6.07E-04	6.37E-04
97	.07	4.30E-04	2.970E-04	4.23E-04	3.851E-03	3.50E-04	6.05E-04	6.35E-04
98	.07	4.29E-04	2.953E-04	4.21E-04	3.83E-03	3.49E-04	6.03E-04	6.33E-04
99	.07	4.28E-04	2.940E-04	4.20E-04	3.815E-03	3.48E-04	6.02E-04	6.32E-04
100	.07	4.27E-04	2.929E-04	4.19E-04	3.80E-03	3.47E-04	6.01E-04	6.31E-04
101	.07	4.27E-04	2.921E-04	4.18E-04	3.78E-03	3.46E-04	6.00E-04	6.30E-04
102	.07	4.27E-04	2.915E-04	4.18E-04	3.77E-03	3.46E-04	6.00E-04	6.30E-04
103	.07	4.27E-04	2.912E-04	4.18E-04	3.76E-03	3.45E-04	6.00E-04	6.29E-04
104	.07	4.27E-04	2.910E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
105	.07	4.27E-04	2.911E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
106	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
107	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
108	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
109	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
110	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
111	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
112	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
113	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
114	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
115	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
116	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
117	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
118	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
119	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
120	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
121	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
122	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
123	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
124	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
125	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
126	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
127	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
128	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
129	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
130	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
131	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
132	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
133	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
134	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
135	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
136	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
137	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
138	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
139	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
140	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
141	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
142	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
143	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04
144	.07	4.27E-04	2.912E-04	4.17E-04	3.75E-03	3.45E-04	6.00E-04	6.29E-04

MUN 499		WTR 1333		STATION NUMBERS			O-AXIAL THERMO-COUPLE SHAPEDOWN TEST					12/10/79-12/1/79	
TIME	ALPHA	U1 ST	U2 ST	U3 ST	T1 ST	T2 ST	T3 ST	T4 ST	T5 ST	T6 ST	T7 ST	T8 ST	
145	0.32	0.740E-04	2.905E-04	4.208E-04	8.754E-03	3.304E-03		0.740E-04	0.250E-04				
146	0.36	0.741E-04	2.904E-04	4.209E-04	8.764E-03	3.305E-03		0.741E-04	0.251E-04				
147	0.40	0.742E-04	2.903E-04	4.210E-04	8.774E-03	3.306E-03		0.742E-04	0.252E-04				
148	0.44	0.743E-04	2.902E-04	4.211E-04	8.784E-03	3.307E-03		0.743E-04	0.253E-04				
149	0.48	0.744E-04	2.901E-04	4.212E-04	8.794E-03	3.308E-03		0.744E-04	0.254E-04				
150	0.52	0.745E-04	2.899E-04	4.213E-04	8.804E-03	3.309E-03		0.745E-04	0.255E-04				
151	0.56	0.746E-04	2.898E-04	4.214E-04	8.814E-03	3.310E-03		0.746E-04	0.256E-04				
152	0.60	0.747E-04	2.897E-04	4.215E-04	8.824E-03	3.311E-03		0.747E-04	0.257E-04				
153	0.64	0.748E-04	2.896E-04	4.216E-04	8.834E-03	3.312E-03		0.748E-04	0.258E-04				
154	0.68	0.749E-04	2.895E-04	4.217E-04	8.844E-03	3.313E-03		0.749E-04	0.259E-04				
155	0.72	0.750E-04	2.894E-04	4.218E-04	8.854E-03	3.314E-03		0.750E-04	0.260E-04				
156	0.76	0.751E-04	2.893E-04	4.219E-04	8.864E-03	3.315E-03		0.751E-04	0.261E-04				
157	0.80	0.752E-04	2.892E-04	4.220E-04	8.874E-03	3.316E-03		0.752E-04	0.262E-04				
158	0.84	0.753E-04	2.891E-04	4.221E-04	8.884E-03	3.317E-03		0.753E-04	0.263E-04				
159	0.88	0.754E-04	2.890E-04	4.222E-04	8.894E-03	3.318E-03		0.754E-04	0.264E-04				
160	0.92	0.755E-04	2.889E-04	4.223E-04	8.904E-03	3.319E-03		0.755E-04	0.265E-04				
161	0.96	0.756E-04	2.888E-04	4.224E-04	8.914E-03	3.320E-03		0.756E-04	0.266E-04				
162	1.00	0.757E-04	2.887E-04	4.225E-04	8.924E-03	3.321E-03		0.757E-04	0.267E-04				
163	1.04	0.758E-04	2.886E-04	4.226E-04	8.934E-03	3.322E-03		0.758E-04	0.268E-04				
164	1.08	0.759E-04	2.885E-04	4.227E-04	8.944E-03	3.323E-03		0.759E-04	0.269E-04				
165	1.12	0.760E-04	2.884E-04	4.228E-04	8.954E-03	3.324E-03		0.760E-04	0.270E-04				
166	1.16	0.761E-04	2.883E-04	4.229E-04	8.964E-03	3.325E-03		0.761E-04	0.271E-04				
167	1.20	0.762E-04	2.882E-04	4.230E-04	8.974E-03	3.326E-03		0.762E-04	0.272E-04				
168	1.24	0.763E-04	2.881E-04	4.231E-04	8.984E-03	3.327E-03		0.763E-04	0.273E-04				
169	1.28	0.764E-04	2.880E-04	4.232E-04	8.994E-03	3.328E-03		0.764E-04	0.274E-04				
170	1.32	0.765E-04	2.879E-04	4.233E-04	9.004E-03	3.329E-03		0.765E-04	0.275E-04				
171	1.36	0.766E-04	2.878E-04	4.234E-04	9.014E-03	3.330E-03		0.766E-04	0.276E-04				
172	1.40	0.767E-04	2.877E-04	4.235E-04	9.024E-03	3.331E-03		0.767E-04	0.277E-04				
173	1.44	0.768E-04	2.876E-04	4.236E-04	9.034E-03	3.332E-03		0.768E-04	0.278E-04				
174	1.48	0.769E-04	2.875E-04	4.237E-04	9.044E-03	3.333E-03		0.769E-04	0.279E-04				
175	1.52	0.770E-04	2.874E-04	4.238E-04	9.054E-03	3.334E-03		0.770E-04	0.280E-04				
176	1.56	0.771E-04	2.873E-04	4.239E-04	9.064E-03	3.335E-03		0.771E-04	0.281E-04				
177	1.60	0.772E-04	2.872E-04	4.240E-04	9.074E-03	3.336E-03		0.772E-04	0.282E-04				
178	1.64	0.773E-04	2.871E-04	4.241E-04	9.084E-03	3.337E-03		0.773E-04	0.283E-04				
179	1.68	0.774E-04	2.870E-04	4.242E-04	9.094E-03	3.338E-03		0.774E-04	0.284E-04				
180	1.72	0.775E-04	2.869E-04	4.243E-04	9.104E-03	3.339E-03		0.775E-04	0.285E-04				
181	1.76	0.776E-04	2.868E-04	4.244E-04	9.114E-03	3.340E-03		0.776E-04	0.286E-04				
182	1.80	0.777E-04	2.867E-04	4.245E-04	9.124E-03	3.341E-03		0.777E-04	0.287E-04				
183	1.84	0.778E-04	2.866E-04	4.246E-04	9.134E-03	3.342E-03		0.778E-04	0.288E-04				
184	1.88	0.779E-04	2.865E-04	4.247E-04	9.144E-03	3.343E-03		0.779E-04	0.289E-04				
185	1.92	0.780E-04	2.864E-04	4.248E-04	9.154E-03	3.344E-03		0.780E-04	0.290E-04				
186	1.96	0.781E-04	2.863E-04	4.249E-04	9.164E-03	3.345E-03		0.781E-04	0.291E-04				
187	2.00	0.782E-04	2.862E-04	4.250E-04	9.174E-03	3.346E-03		0.782E-04	0.292E-04				
188	2.04	0.783E-04	2.861E-04	4.251E-04	9.184E-03	3.347E-03		0.783E-04	0.293E-04				
189	2.08	0.784E-04	2.860E-04	4.252E-04	9.194E-03	3.348E-03		0.784E-04	0.294E-04				
190	2.12	0.785E-04	2.859E-04	4.253E-04	9.204E-03	3.349E-03		0.785E-04	0.295E-04				
191	2.16	0.786E-04	2.858E-04	4.254E-04	9.214E-03	3.350E-03		0.786E-04	0.296E-04				
192	2.20	0.787E-04	2.857E-04	4.255E-04	9.224E-03	3.351E-03		0.787E-04	0.297E-04				
193	2.24	0.788E-04	2.856E-04	4.256E-04	9.234E-03	3.352E-03		0.788E-04	0.298E-04				
194	2.28	0.789E-04	2.855E-04	4.257E-04	9.244E-03	3.353E-03		0.789E-04	0.299E-04				
195	2.32	0.790E-04	2.854E-04	4.258E-04	9.254E-03	3.354E-03		0.790E-04	0.300E-04				
196	2.36	0.791E-04	2.853E-04	4.259E-04	9.264E-03	3.355E-03		0.791E-04	0.301E-04				
197	2.40	0.792E-04	2.852E-04	4.260E-04	9.274E-03	3.356E-03		0.792E-04	0.302E-04				
198	2.44	0.793E-04	2.851E-04	4.261E-04	9.284E-03	3.357E-03		0.793E-04	0.303E-04				
199	2.48	0.794E-04	2.850E-04	4.262E-04	9.294E-03	3.358E-03		0.794E-04	0.304E-04				
200	2.52	0.795E-04	2.849E-04	4.263E-04	9.304E-03	3.359E-03		0.795E-04	0.305E-04				

RUN 499 WTR 1433 STATION NUMBERS CO-ORDINATE INTERMEDIATE SHAPETONK TEST 12/10/79-12/11/79

TIME	ALPHA	01 ST	02 ST	03 ST	11 ST	12 ST	14 ST	15 ST
201	.866	.07 4.192E-04	2.802E-04	4.111E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
202	.866	.07 4.192E-04	2.802E-04	4.111E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
203	.873	.07 4.192E-04	2.794E-04	4.113E-04	4.660E-03	3.621E-03	4.625E-04	4.192E-04
204	.877	.07 4.200E-04	2.791E-04	4.116E-04	4.660E-03	3.621E-03	4.625E-04	4.192E-04
205	.881	.07 4.200E-04	2.787E-04	4.115E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
206	.884	.07 4.200E-04	2.784E-04	4.114E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
207	.889	.07 4.200E-04	2.778E-04	4.112E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
208	.894	.07 4.200E-04	2.774E-04	4.110E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
209	.894	.07 4.200E-04	2.771E-04	4.110E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
210	.902	.06 4.201E-04	2.768E-04	4.114E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
211	.904	.06 4.197E-04	2.765E-04	4.115E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
212	.910	.07 4.192E-04	2.763E-04	4.117E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
213	.914	.06 4.194E-04	2.761E-04	4.115E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
214	.914	.11 4.174E-04	2.759E-04	4.200E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
215	.923	.15 4.161E-04	2.757E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
216	.927	.20 4.150E-04	2.756E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
217	.931	.25 4.126E-04	2.755E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
218	.934	.32 4.104E-04	2.755E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
219	.934	.40 4.070E-04	2.754E-04	4.201E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
220	.943	.44 4.048E-04	2.754E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
221	.944	.50 4.014E-04	2.755E-04	4.201E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
222	.950	.69 3.476E-04	2.756E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
223	.956	.81 3.435E-04	2.757E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
224	.960	.93 3.405E-04	2.757E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
225	.964	1.07 3.380E-04	2.761E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
226	.964	1.22 3.376E-04	2.764E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
227	.973	1.37 3.370E-04	2.764E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
228	.977	1.54 3.365E-04	2.773E-04	4.201E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
229	.981	1.71 3.365E-04	2.774E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
230	.985	1.89 3.358E-04	2.774E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
231	.984	2.09 3.346E-04	2.792E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
232	.993	2.24 3.344E-04	2.800E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
233	.997	2.50 3.310E-04	2.810E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
234	1.002	2.71 3.279E-04	2.820E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
235	1.004	2.94 3.177E-04	2.830E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
236	1.016	3.17 3.173E-04	2.841E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
237	1.014	3.42 2.987E-04	2.853E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
238	1.014	3.66 2.899E-04	2.866E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
239	1.022	3.92 2.810E-04	2.874E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
240	1.027	4.14 2.719E-04	2.884E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
241	1.031	4.45 2.627E-04	2.905E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
242	1.034	4.72 2.534E-04	2.918E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
243	1.034	5.01 2.441E-04	2.931E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
244	1.043	5.24 2.348E-04	2.944E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
245	1.047	5.44 2.256E-04	2.957E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
246	1.051	5.84 2.164E-04	2.970E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
247	1.052	6.18 2.071E-04	2.983E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
248	1.060	6.44 1.978E-04	2.995E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
249	1.064	6.74 1.886E-04	3.007E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
250	1.064	7.10 1.794E-04	3.015E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
251	1.072	7.42 1.702E-04	3.030E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
252	1.074	7.74 1.609E-04	3.041E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
253	1.081	8.05 1.517E-04	3.051E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
254	1.084	8.34 1.425E-04	3.061E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
255	1.084	8.70 1.333E-04	3.071E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04
256	1.094	9.02 1.241E-04	3.080E-04	4.202E-04	4.660E-03	3.620E-03	4.625E-04	4.192E-04

RUN 499		NTR 1333		STANTON NUMBERS		LO-AXIAL IHEMUOUPLE SHAWEDOM TEST		12/10/79-12/12/79	
TIME	ALPHA	G1 ST	G2 ST	G3 ST	T1 ST	T2 ST	T4 ST	T5 ST	
257	1.097	9.35	1.313E-04	3.088E-04	9.541E-04	1.022E-02	5.705E-04	1.343E-03	
258	1.101	9.68	1.257E-04	3.095E-04	9.715E-04	1.025E-02	5.192E-04	1.408E-03	
259	1.106	10.00	1.206E-04	3.102E-04	1.026E-03	1.028E-02	5.187E-04	1.455E-03	
260	1.110	10.32	1.159E-04	3.108E-04	1.028E-03	1.028E-02	5.166E-04	1.499E-03	
261	1.114	10.65	1.117E-04	3.113E-04	1.037E-03	1.033E-02	5.176E-04	1.540E-03	
262	1.118	10.97	1.079E-04	3.117E-04	1.039E-03	1.033E-02	5.166E-04	1.584E-03	
263	1.122	11.29	1.046E-04	3.120E-04	1.041E-03	1.038E-02	5.174E-04	1.630E-03	
264	1.126	11.61	1.018E-04	3.122E-04	1.042E-03	1.044E-02	5.195E-04	1.684E-03	
265	1.130	11.93	9.942E-05	3.123E-04	1.047E-03	1.046E-02	5.196E-04	1.728E-03	
266	1.134	12.24	9.750E-05	3.125E-04	1.048E-03	1.049E-02	5.201E-04	1.774E-03	
267	1.139	12.55	9.602E-05	3.122E-04	1.048E-03	1.048E-02	5.220E-04	1.822E-03	
268	1.143	12.86	9.499E-05	3.120E-04	1.048E-03	1.055E-02	5.243E-04	1.868E-03	
269	1.147	13.16	9.438E-05	3.117E-04	1.048E-03	1.059E-02	5.263E-04	1.918E-03	
270	1.151	13.46	9.418E-05	3.114E-04	1.048E-03	1.059E-02	5.248E-04	1.963E-03	
271	1.155	13.76	9.377E-05	3.110E-04	1.048E-03	1.061E-02	5.257E-04	2.015E-03	
272	1.160	14.04	9.404E-05	3.105E-04	1.048E-03	1.063E-02	5.261E-04	2.065E-03	
273	1.164	14.33	9.388E-05	3.099E-04	1.048E-03	1.065E-02	5.255E-04	2.114E-03	
274	1.168	14.60	9.371E-05	3.094E-04	1.048E-03	1.066E-02	5.241E-04	2.165E-03	
275	1.172	14.88	9.467E-05	3.086E-04	1.048E-03	1.066E-02	5.236E-04	2.218E-03	
276	1.176	15.14	1.005E-04	3.079E-04	1.048E-03	1.069E-02	5.230E-04	2.271E-03	
277	1.180	15.40	1.026E-04	3.071E-04	1.048E-03	1.070E-02	5.217E-04	2.324E-03	
278	1.184	15.65	1.049E-04	3.063E-04	1.048E-03	1.071E-02	5.200E-04	2.377E-03	
279	1.189	15.89	1.074E-04	3.053E-04	1.048E-03	1.074E-02	5.184E-04	2.433E-03	
280	1.193	16.13	1.101E-04	3.043E-04	1.048E-03	1.078E-02	5.173E-04	2.490E-03	
281	1.197	16.35	1.129E-04	3.033E-04	1.048E-03	1.080E-02	5.159E-04	2.541E-03	
282	1.201	16.57	1.158E-04	3.021E-04	1.048E-03	1.082E-02	5.156E-04	2.592E-03	
283	1.205	16.78	1.188E-04	3.009E-04	1.048E-03	1.084E-02	5.121E-04	2.638E-03	
284	1.209	16.98	1.218E-04	2.996E-04	1.048E-03	1.082E-02	5.104E-04	2.685E-03	
285	1.214	17.17	1.248E-04	2.982E-04	1.048E-03	1.085E-02	5.095E-04	2.730E-03	
286	1.218	17.37	1.277E-04	2.967E-04	1.048E-03	1.085E-02	5.077E-04	2.773E-03	
287	1.222	17.52	1.307E-04	2.952E-04	1.048E-03	1.086E-02	5.063E-04	2.815E-03	
288	1.226	17.68	1.335E-04	2.936E-04	1.048E-03	1.086E-02	5.023E-04	2.845E-03	
289	1.230	17.84	1.363E-04	2.919E-04	1.048E-03	1.086E-02	5.010E-04	2.881E-03	
290	1.234	17.99	1.389E-04	2.902E-04	1.048E-03	1.086E-02	5.014E-04	2.914E-03	
291	1.239	18.11	1.413E-04	2.884E-04	1.048E-03	1.079E-02	4.980E-04	2.937E-03	
292	1.243	18.27	1.437E-04	2.866E-04	1.048E-03	1.079E-02	4.963E-04	2.962E-03	
293	1.247	18.33	1.458E-04	2.848E-04	1.048E-03	1.076E-02	4.930E-04	2.979E-03	
294	1.251	18.43	1.478E-04	2.830E-04	1.048E-03	1.078E-02	4.926E-04	2.997E-03	
295	1.255	18.51	1.495E-04	2.811E-04	1.048E-03	1.076E-02	4.917E-04	3.008E-03	
296	1.259	18.59	1.511E-04	2.793E-04	1.048E-03	1.075E-02	4.881E-04	3.009E-03	

TABLE 5 ACCURACIES FOR REPEATABILITY OF RUN 496 VS. RUN 498
(UPSWEEP VS. DOWNSWEEP)

ALPHA	T1	T2	T3	T4	T5	G1	G2	G3
0°	2.3%	7.7%	6.9%	9.8%	20.1%	7.6%	12.7%	-
3°	.3%	2.1%	2.9%	9.1%	17.8%	4.9%	13.1%	-
5°	.3%	4.6%	5.6%	6.2%	18.3%	8.7%	9.5%	-
10°	.6%	11.6%	1.2%	8.6%	14.9%	21.8%	8.8%	-
16°	1.0%	17.4%	7.7%	5.2%	12.2%	4.9%	4.5%	-

(Note: Values in % difference in agreement)

TABLE 6 ACCURACIES FOR REPEATABILITY OF RUN 496 AND RUN 498 VS. RUN 497
(DYNAMIC SWEEP VS. STATIC)

RUN	ALPHA	T1	T2	T3	T4	T5	G1	G2	G3
496 vs. 497	10°	0%	6.9%	2.7%	7.4%	3.8%	19.3%	5.5%	15.1%
498 vs. 497	10°	.7%	5.1%	1.5%	1.3%	11.5%	3.0%	3.5%	-

(Note: Values in % difference in agreement)

TABLE 7 ACCURACIES FOR REPEATABILITY OF RUN 496 AND RUN 499
("THICK WALL" VS. "THIN WALL")

ALPHA	T1	T2	T3	T4	T5	G1	G2*	G3
0°	1.4%	6.6%	-	16.1%	10.2%	17.0%	-	8.0%
3°	.4%	2.6%	-	16.1%	9.0%	14.0%	-	13.6%
5°	1.2%	2.6%	-	13.8%	3.1%	13.6%	-	14.8%
10°	.7%	2.3%	-	16.7%	12.1%	16.5%	-	17.8%
16°	2.7%	5.9%	-	16.4%	11.4%	26.2%	-	17.7%

*G2 was recessed in model wall on Run 499. No comparison of this gage was made.
(Note: Values in % difference in agreement)

TABLE 8 ACCURACIES FOR AGREEMENT OF RUNS 496, 497, AND 499 vs.
THE G.E. 3-D VISCOUS CODE

RUN	ALPHA	T1	T2	T3	T4	T5	G1	G2	G3
Run 496 vs. Code	0°	10.0%	0.0%	.5%	5.9%	1.2%	.6%	4.6%	10.7%
	5°	2.8%	25.1%	12.6%	6.0%	.1%	5.8%	3.5%	6.6%
Run 498 vs. Code	0°	5.4%	3.5%	1.9%	.4%	15.4%	2.7%	12.9%	-
	5°	8.0%	31.7%	17.4%	5.4%	13.1%	8.2%	7.3%	-
Run 499 vs. Code	0°	6.2%	2.3%	-	6.6%	15.3%	13.0%	-	13.0%
	5°	7.1%	25.7%	-	3.0%	13.2%	14.9%	-	14.9%

(Note: Values in % difference in agreement)

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TERMS

ALPHA	angle of attack ($^{\circ}$)
C	calibrated Gardon gage sensitivity ($\frac{\dot{q}}{E}$)
C_p	specific heat
E	output voltage
k	thermal diffusivity
K	thermal conductivity
L	minimum effective sensing probe length
M_{∞}	free stream Mach number
MACH	free stream Mach number
P_o	supply pressure (psia)
PINF	free stream pressure (psia)
PO	supply pressure (psia)
\dot{q}	heat transfer rate (BTU/ft ² -sec)
Q	cumulative heat transfer to a surface (BTU/ft ²)
QDOT	heat transfer rate (BTU/ft ² -sec)
$RE_{\infty/ft}$	free stream Reynolds number
REINF	free stream Reynolds number
RHOINF	free stream density (lbm/ft ³)
ST	Stanton number
t	time

TERMS (Cont.)

T	temperature
T_o	supply temperature ($^{\circ}\text{F}$)
T_{01}	equivalent ideal gas supply temperature ($^{\circ}\text{F}$)
T_w	measured wall temperature ($^{\circ}\text{F}$)
T_{INF}	free stream temperature ($^{\circ}\text{F}$)
T_0	supply temperature ($^{\circ}\text{F}$)
T_{01}	equivalent ideal gas supply temperature ($^{\circ}\text{F}$)
T_W	measured wall temperature ($^{\circ}\text{F}$)
U_{∞}	free stream velocity (ft/sec)
U_{INF}	free stream velocity (ft/sec)
α	angle of attack
δ	thermoelectric sensitivity ($\mu\text{V}/^{\circ}\text{F}$)
ρ	density
ρ_{∞}	free stream density (lbm/ft^3)
τ	dummy variable of integration
τ_G	calibrated Gardon gage time delay constant